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# Monthly Cyclopedia and Medical Bulletin

(CONSOLIDATED)

EDITED BY

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## NEWS AND THERAPEUTIC HINTS.

## IODINE TREATMENT OF PLAGUE.

A correspondent in an Indian paper calls attention to a simple method of treatment of bubonic plague, which treatment is said to be quite efficacious. The patient is given a dose of castor oil and then from 5 to 7 drops of tincture of iodine in a little water. The buboes are painted with tincture of iodine. A milk diet is given. The following morning there are administered 2 drops of tincture of iodine in a little water. Quinine is given if fever is present. This method of treatment was employed in 9 cases of plague, all of which recovered. At the time during which these cases were under treatment there was an outbreak of a virulent type of plague in the town in which these cases occurred and 500 deaths were recorded. Practically the same method of treatment had previously been employed in 51 cases of plague with 50 recoveries. (Medical Record.)

## RED CROSS CHRISTMAS SEALS.


More than 44,000,000 Red Cross Christmas seals were sold last December, according to a report issued recently by the National Association for the Study and Prevention of Tuberculosis and the American Red Cross. In this

way \$440,000 is netted for antituberculosis work in various parts of the United States.

The sale in 1913 was a gain of 4,000,000 seals over 1912, or 10 per cent. It is hoped that this year the 50,000,000 mark will be reached. The seal design for 1914 has been selected and orders for the printing of 100,000,000 seals have been placed. Plans for the organization of a larger sale this year than ever before have been perfected. New York State led the country last year with a sale of over 10,500,000 seals, or one for each man, woman, and child in the State. Of this number, more than 6,825,000 were sold outside of New York city by the State Charities Aid Association. Pennsylvania's sale was second largest, aggregating 3,125,000 seals. Ohio came next with a sale of 2,800,000, Wisconsin fourth with 2,700,000, and Illinois fifth with 2,500,000. Hawaii sold the most seals per capita, the total sale being somewhat over two for each inhabitant. Rhode Island came second with a sale of two per person. Beginning with a sale of 13,500,000 in 1908, in six seasons the revenue which these little holiday seals have brought to the antituberculosis campaign has more than tripled, the aggregate for the period being over \$1,800,000, or 180,000,000 seals. (N. Y. Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

SEASICKNESS.

L. Pron outlines this treatment as follows: The diet should be light and a purgative should be taken the day before embarkation. With the onset of the attack of seasickness the patient should be placed in the Trendelenburg position and the abdomen should be firmly compressed by means of a flannel bandage. The patient should be made to take deep and frequent inspirations in order to diminish the excitability of the vomiting center. The following should be administered:—

- R Powdered nux vomica, Gm. 0.02.
- Extract of belladonna leaves,
- Stovaine, of each, Gm. 0.01.
- Extract of hyoscyamus, Gm. 0.05.

This should be given in pill form one hour before embarkation and then three times a day.

Burwinkler, regarding seasickness as the result of a vasoconstriction in the nerve centers, recommends the following:—

- R Spirit of glyceryl nitrate, gtt. xx.
- Distilled water, c.c. 150.

Of this solution there should be given 1 to 4 teaspoonfuls in twenty-four hours.

One may try likewise the inhalation of 5 to 10 drops of amyl nitrite three or four times in twenty-four hours.

Naamé has suggested the use of epinephrin in three doses of 2 mg. each as a preventive, to be taken respectively after the last meal preceding embarkation, three hours later, and then when on board ship. Six mg. should be taken in one dose upon the onset of an attack after the stomach has been emptied. ("Formulaire de thérapeutique clinique"; Med. Record.)

CHARCOAL IN TREATMENT OF MEMBRANOUS ENTEROCOLITIS.

A. Rodiet reports excellent results following the treatment of this usually intractable condition by means of large doses of poplar-wood charcoal. From 2 to 4 tablespoonfuls of the latter are given daily, mixed with water and administered after the midday and evening meals. The efficacy of this remedy is said to be due to its power to absorb gases from the stomach and intestine, to its antiseptic effect, and to its action in stimulating the contractility of the stomach. (Journal de médecine de Paris; Med. Record.)



## NEWS AND THERAPEUTIC HINTS.

## PRURITUS ANI.

Crapper recommends two simple remedies, both of which in his experience have been remarkably efficient. The first is ordinary tincture of iodine; the second, and even better remedy, is the compound tincture of benzoin. In a minute or two after the application of this remedy, the inclination to scratch has been relieved. It may be used two or three times daily and it never irritates. (Amer. Jour. of Surgery.)

## PTYALISM.

- ℞ Potassii chloratis, gr. xvj.  
Tinct. ferri chloridi, fʒij.  
Glycerini, fʒj.  
Aquæ, fʒij.  
M. Sig.: Teaspoonful every two hours.
- ℞ Acidi tannici, ʒj.  
Syrupi aurantii,  
Glycerini, āā fʒj.  
Aquæ, q. s. ad fʒvj.  
M. Sig.: Use as a mouth-wash five or six times daily. (Prescription.)

## PRURITUS OF VULVA.

- ℞ Hydrargyri chloridi corrosivi, gr. xv.  
Alcoholis, fʒj.  
Aq. rosæ, fʒv.  
Aq. destillatæ, fʒvij.  
M. et ft. lotio. Sig.: Apply locally twice a day; or
- ℞ Spts. chloroformi, fʒij.  
Olei amygdalæ dulcis, fʒij.  
M. Sig.: Apply locally; or
- ℞ Hydrargyri chloridi corrosivi,  
Ammonii chloridi, āā gr. ij.  
Emulsionis amygdalæ, fʒvj.  
M. Sig.: As a local application; or
- ℞ Orthoformi,  
Diiodoformi,  
Talci, āā ʒij.  
M. et ft. pulvis. Sig.: Apply locally; or
- ℞ Mentholis, gr. ¾.  
Guaiacolis, gr. viiss.  
Zinci oxidi, ʒiiss.  
Petrolati liquidi, ʒj.  
M. et ft. unguentum. Sig.: Apply locally.

## HOSPITAL LIQUID SOAPS.

The following is Terrier's formula for an antiseptic soap in liquid form:—

- ℞ White castile soap,  
Soft soap,  
Olive oil, of each, kg. 1.  
Water, liters 50.  
Naphthol, Gm. 25.  
Lemon oil, enough to perfume.

Heat the soap and oil together in the water for twenty-four hours at least, then add the naphthol and filter.

Another good formula is that of Richaud. It is as follows:—

- ℞ White soap,  
Soft soap, of each, Gm. 1000.  
Poppy oil, c.c. 500.  
Water, liters 3.

Rasp the white soap and add it to the other constituents; warm the whole mixture until a homogeneous mass is obtained. Now add a mixture of the following composition:—

- ℞ Glycerin,  
Betanaphthol, of each, Gm. 50.  
Alcohol, c.c. 500.  
Oil of lemon, c.c. 50.

Then add enough water to make 15 liters of finished product. (National Druggist.)

## INHALATION IN CHRONIC LARYNGITIS.

There are two methods of inhaling: In the first the medicament is atomized to impalpable vapor by means of sterilized air in a cabinet, while in the second the inhalation is through a sterile mouth-piece or nose-piece.

The medicated steam, a mixture of compound tincture of benzoin, 1:20, is inhaled at a temperature of from 140° to 170° F. for about fifteen minutes. This is followed by inhalations of oily substances without the aid of heat, either of the two following being used:—

- ℞ Camphoræ, ʒj.  
Picis liquidæ, fʒij.  
Iodi, gr. xx.  
Creosoti, fʒj.  
Mentholis, gr. xxx.  
Olei sesami, fʒiv.

Or a 5 per cent. solution of the following:—

- ℞ Iodi, ʒvj.  
Acidi oleici, ʒij.  
Petrolati liquidi, fʒiv.  
Olei sesami, q. s. ad Oj.

The patient remains indoors for from fifteen to thirty minutes after each treatment. The use of tobacco is prohibited. (E. Mayer, in Merck's Archives.)



## NEWS AND THERAPEUTIC HINTS.

## CHOLERA MORBUS.

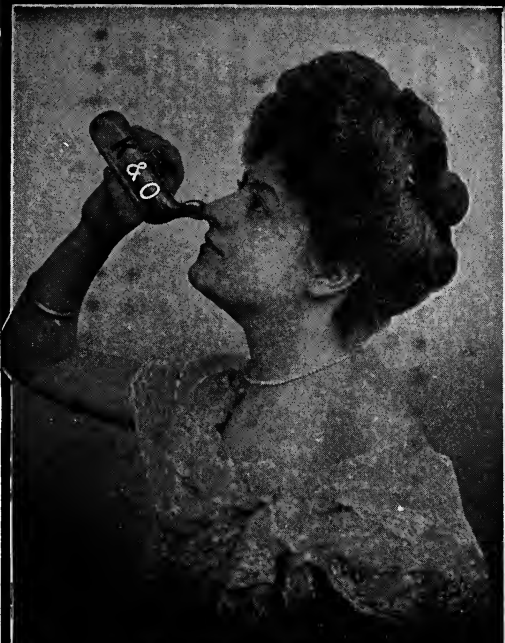
In the later stages of an attack Wilcox recommends the following:—

R. Acidi sulphurici aromat.,  
Ext. hæmatoxyl., aa m. vj.  
Spt. chloroformi, m. xij.  
Fluidext. ipecacuanhæ, m. iij.  
Syrupi zingiberis, q. s. ad f3j.

M. Sig.: One dose every two hours. (Med. Fortnightly.)

## TOLERATION OF ARSENIC BY HUMAN SYSTEM.

Harding conducted a series of experiments to ascertain the toleration of arsenic by the human system. He commenced with  $\frac{1}{60}$ -grain doses three times a day immediately after food, and continued for four days without any results, beneficial or otherwise. Analysis of an aliquot part of the urine passed, the daily dose of arsenic being  $\frac{1}{20}$  grain, yielded  $\frac{1}{60}$  grain per diem, thus showing  $\frac{3}{100}$  grain per diem otherwise disposed of. Doses of  $\frac{1}{15}$  grain were taken on an empty stomach three times daily. The result was that the system became irritated and a distinct feeling of discomfort was experienced, lasting over two hours; 75 per cent. of this amount appeared in the urine;  $\frac{1}{6}$  grain was then taken at a single administration. This also produced irritability and uncomfortable abdominal pains of a more or less severe character. Recourse was now had to the old dosage of  $\frac{1}{15}$  grain, and after the system became quite normal again the dose was increased to  $\frac{1}{12}$  grain, then to  $\frac{1}{10}$  grain,  $\frac{1}{8}$  grain, and  $\frac{1}{6}$  grain. By thus going gradually to  $\frac{1}{6}$  grain it was found that the amount was quite well tolerated without any discomfort or marked changes, and, moreover, the average percentage of the drug appearing in the urine was maintained. At this stage, but not before, the urine began to depart from normal. Proceeding still onward the doses were increased to  $\frac{2}{5}$  grain,  $\frac{3}{4}$  grain,  $\frac{5}{8}$  grain, 1 grain. At this point it was felt that the limit was being approached. The next and the highest dose reached was  $1\frac{1}{2}$  grains, which produced irritability and distinct and lasting discomfort every way it was taken, and all precautions notwithstanding. The drug was now discontinued, but fullness after meals and general derangement were felt for several days. Harding then kept on with the drug, decreasing the amount daily. In one week  $\frac{1}{6}$  grain was reached and in less than another week arsenic was dispensed with altogether without any of the symptoms mentioned above. (London Lancet.)



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For Children of ten or more years, from one-quarter to one-half teaspoonful.

For children of three or more years, from five to ten drops.

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## NEWS AND THERAPEUTIC HINTS.

### HERPES ZOSTER.

Apply fluidextract yerba reuma locally to any stage of the disease, and it will promptly abort it, and for so-called fever sores of the lips, that are the source of so much worry to so many young ladies, the application of the fluidextract on the first indication of the trouble will prevent its further development, but it must be applied often. (Walker, in Med. Summary.)

### DELIRIUM TREMENS.

At the Strassburg Hospital it has been found quite necessary to give alcohol to patients suffering from frank or impending delirium tremens. At the most, a little sherry may be added to the food if the patient refuses nourishment. The sovereign remedy is digitalis, which should be given promptly and in rather large doses. The writer uses digalen, and gives 10 to 20 drops three times daily by mouth. A prompt improvement usually follows. Before this treatment was used in the hospital, 8 out of 69 cases of alcoholic delirium died; since then, 23 patients have been treated without a death. (Scharnke, in Münch. med. Woch.)

### FLATULENT COLIC.

R Spts. ammon. arom., f3iss.  
Tinct. belladonnæ, f3ss.  
Tinct. zingiberis, f3j.  
Spts. chloroformi, f3j.

M. Sig.: One tablespoonful every two hours if necessary for adults. (Med. Sentinel.)

### SUNBURN AND PRICKLY HEAT.

The following combinations are recommended:—

R Sulphuris præcip., 3j.  
Zinci oxidi, 3iv.  
Olei amygdalæ (expressed), f3j.  
Lanolini, 3j.  
Ext. violet, 3j.

M. Sig.: Apply freely two or three times daily; or:—

R Ichthyol, 3ij.  
Olei amyg. (expressed), f3ij.  
Ung. aquæ rosæ, 3vj.  
Lanolini, 3vj.  
Olei rosæ, gtt. ij.

M. Sig.: Apply two or three times daily; or:—

R Olei olivæ, f3iv.  
Menthol., gr. xv.  
Ung. aquæ rosæ,  
Lanolini, aa 3vj.

M. Sig.: To be used as a dusting powder several times daily. (Med. Sentinel.)

### DISINFECTION OF TYPHOID STOOLS.

H. Linenthal and H. N. Jones give an account of testing a method for disinfecting typhoid stools in a practical and effective manner which requires only such utensils as are available in every household, and so simple as to require little intelligent effort on the part of the attendant. Such a method was described by Prausnitz, of Austria, at the Fifteenth International Congress on Hygiene and Dermography, held in Washington September, 1912. The method was devised by A. M. Kaiser in the Hygiene Institute of Gratz University. It consists of adding enough hot water to cover the stool in the receptacle and then adding about one-fourth of the entire bulk of quicklime (calcium oxide), covering the receptacle and allowing it to stand for two hours. The hydration of the lime generates enough heat to destroy the typhoid organism. Linenthal and Jones believe that this is a simple, efficacious method and should take the place of the various methods now recommended by local boards of health. (Boston Med. and Surg. Jour.)

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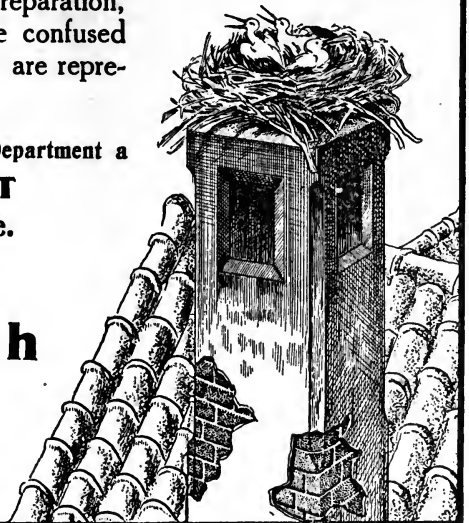
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### NEWS AND THERAPEUTIC HINTS.

#### HOW TO ABORT AN ATTACK OF QUINCY.

The following simple experiment is vaunted by the editor of the Journal of Advanced Therapeutics: After first applying a mustard plaster, a damp cloth wrung from hot water is applied over a surface of which the indurated gland which is distinctly felt is the center. Over this pads made

of many thicknesses of woolen cloth which have been heated in an oven are alternately placed, changing every fifteen minutes for five hours. By this means an early quincy can be readily aborted. The burden of the effort is the prolonged application of intense heat—the thing too often neglected—for the induction of hyperemia. (Med. Summary.)

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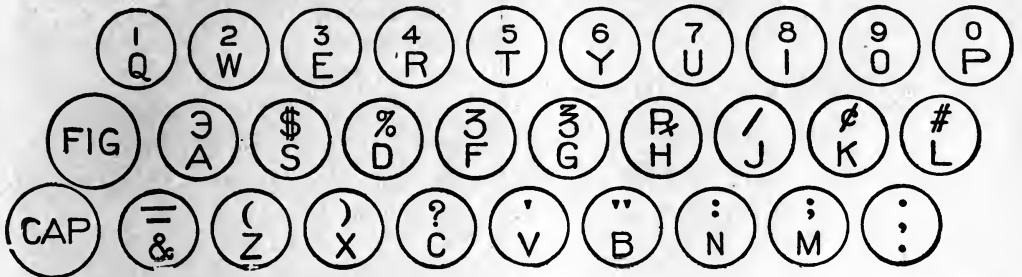
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### NEWS AND THERAPEUTIC HINTS.

#### BROMIDROSIS.

℞ Acidi salicylici pulv., gr. xv.  
Acidi borici pulv., ʒij.  
Amyli pulv., ʒvj.  
M. Sig.: Dusting powder. (Merck's Archives.)

#### MUCOUS COLITIS IN CHILDREN.

Whipham states that it is necessary to exclude sugars from the diet and to administer alkalies to dissolve the mucus. The following may be given before meals:—

℞ Potassii bicarbonatis,  
Potassii citratis, āā gr. v.  
Tinct. nucis vomicæ, m̄ij.  
Inf. gentianæ comp., q. s. ad fʒij.

A rhubarb and soda powder, together with 2 grains of gray powder, should be given every night or every other night. (Merck's Archives.)

#### RINGWORM OF THE BODY.

℞ Lac. sulphur., ʒiiss.  
Spts. saponis viridis,  
Tinct. lavendulæ, āā fʒvj.  
Glycerini, fʒss.  
M. Sig.: To be applied locally; or:—  
℞ Iodi (pure), ʒj.  
Olei picis liq. (sp. gr. .853), fʒss.  
M. (These preparations should be mixed with care gradually.) Sig.: Apply locally; or:—  
℞ Creosoti, m̄xx.  
Olei ricini, fʒiij.  
Sulphuris præcip., ʒiij.  
Potassii bicarb., ʒj.  
Adipis, ʒj.  
M. Sig.: To be used locally in obstinate cases of ringworm of the adult. (Med. Sentinel.)

#### ORCHITIS.

After the first week the following may be applied locally:—

℞ Ungt. hydrargyri,  
Ungt. belladonnæ,  
Ichthyolis,  
Adipis lanæ, āā ʒij.

M. Sig.: Apply locally. (Christian, in Medical Fortnightly.)

#### BRONCHIAL ASTHMA.

Anders has found the following formula very useful:—

℞ Tr. lobeliæ, fʒj.  
Tr. nitroglycerini (1 per cent.), m̄xvj.  
Sodii bromidi, ʒv.  
Vini ipecac., fʒv.  
Ext. hyoscyami, gr. vij.  
Elix. simplicis, q. s. ad fʒiv.

Sig.: Teaspoonful in water every hour or two. (Merck's Archives.)

#### NERVOUS PALPITATION.

Ortner employs in this condition, as well as in all cases of neurasthenia associated with cardiac distress, the following:—

℞ Iron and quinine citrate, gr. xlv.  
Strychnine sulphate, gr. j.  
Fluidextract of kola,  
Sodium glycerophosphate, of each, fʒvj.  
Syrup of orange, fʒvij.

The first four ingredients are dissolved slowly with the aid of heat in the syrup of orange. The dose of this mixture is 1 teaspoonful three times a day after meals. (Med. Rec.)



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## NEWS AND THERAPEUTIC HINTS.

### RELIEF OF GASTRIC FLATULENCE.

According to A. P. Luff, this may be effected by means of the following mixture:—

℞ Aromatic spirit of ammonia, ℥xxv.

Spirit of chloroform, ℥xv.

Spirit of peppermint, ℥xij.

Spirit of cajuput (B. P., oil of cajuput 1, alcohol 9), ℥viij.

This constitutes a teaspoonful dose, which is to be taken in a wineglassful of water whenever the flatulence becomes troublesome. (Lancet.)

### MATERNITY BENEFITS.

Australia has set an example of advanced legislation in the way of granting assistance to mothers at the period of confinement, says the Canada Lancet for August, 1914. In that portion of the British domains, \$25 is paid for each child that is born. This assists the mother to secure what care she may require. There are no restrictions on the payment. It goes to all classes alike. During the time that the act has been in operation, now a year and a half, the commonwealth of Australia has paid out in maternity benefits the substantial sum of \$5,000,000. This

money has largely been obtained from the wealthy in the form of taxes, and has largely gone to the working classes, by far the most numerous.

In Britain, under the National Insurance Act, 30 shillings is paid to women coming under the terms of the act, when children are born. This is a small sum, but it may help a very poor woman at a time of need. That it does so is proved by the falling off in the numbers who are seeking charity and free hospital care at such times. The steadily falling birth rate in France has given rise to a good deal of discussion in favor of similar aid. (N. Y. Med. Jour.)

### TARDY MALNUTRITION OF SYPHILITIC ORIGIN.

C. G. Kerley states that he has employed the following prescription in the treatment of this condition in children from 5 to 10 years of age:—

℞ Bichloride of mercury, gr. ⅞.

Tincture of nux vomica, gtt. iij.

Ferrated extract of apples, gr. ⅓.

Quinine bisulphate, gr. ij.

This should be given in a capsule three times daily after meals. ("Practice of Pediatrics"; Med. Rec.)

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## NEWS AND THERAPEUTIC HINTS.

### INFLUENCE OF DIET ON GROWTH OF HAIR.

Several cases of shedding of hair after influenza have confirmed the author's opinion that diet has much to do with the production and cure of symptomatic alopecia. Hair contains 5 per cent. of sulphur, and its ash 20 per cent. of silicon and 10 per cent. of iron and manganese. Solutions of beef, or rather of part of it, starchy mixtures, and even milk, which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair result. The color and strength of hair in young mammals is not attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above-named elements are various albuminoids, and the oat, the ash of that grain yielding 22 per cent. of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism.

Those races of men that consume most meat are the most hirsute. Again, it is well known in the Zoological Gardens that carnivorous mammals, birds, and serpents keep their hair, feathers, or cuticle in bad condition unless fed with whole animals, and the egesta contain the cuticular appendages of their prey in a digested or partly digested state. It is also an old, well-proved fact that a closely restricted diet—cheese, for example—soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhea, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vasomotor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. The author has always found that friction of the scalp with pomades and lotions, dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt added, and rough rubbing of the rest of the body, will flush the capillaries of the affected parts more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness. (Mapother, in The British Medical Journal.)

### IVY POISONING.

Dermatitis venenata, always very unpleasant and occasionally dangerous, presents as long a list of possible medicaments as is claimed for pertussis or pneumonia.

Recent studies have demonstrated the cause of the irritation and it is now known that the irritating agent may be neutralized by perman-

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ganate of potash solution. The application of the permanganate solution gives great relief and when used soon after exposure or as soon as the first vesicles appear will avert the distressing itching. Treatment should be as follows: First thoroughly wash the part or parts with warm water and soap; then use an alkaline wash, as for example a teaspoonful of bicarbonate of sodium to 1 pint of water. Following this should come several washings in warm 2 per cent. to 4 per cent. solution of permanganate of potassium. The strength of the permanganate solution should vary according to the severity of the attack. (Med. Review of Reviews.)

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### NEWS AND THERAPEUTIC HINTS.

#### STOMATITIS.

R Phenolis, gtt. viij.

Sodii bicarbonatis, ʒij.

Glycerini, fʒiv.

Aquæ, q. s. ad fʒiv.

M. Sig.: Use as a mouth wash. (Merck's Archives.)

#### LOCAL APPLICATION OF ALCOHOL IN BURNS.

Dr. M. J. Breitmann, in *Therapeutische Monatshefte*, Berlin, states that in an experience of fourteen years he has never witnessed any results with other measures comparable to those which follow immediate application of 60 or 70 per cent. alcohol to burns of the first or second degree. The burned area can be placed in a pan containing the alcohol or treated with compresses kept moistened with the alcohol. The pain is relieved, the inflammation subsides, the blisters retrogress, and a dry scab forms, healing proceeding smoothly and leaving no trace of the burn. The shorter the interval after the burn before the alcohol is applied, the better the outcome in every way. When the blisters have not been opened the alcohol does not smart; alcohol is too painful to apply to burns of the third degree. The burned area has been sterilized by the heat, and the alcohol, applied at once, before any germs from without have reached the area, dehydrates, dries and tans the tissues, and under the tarred surface the parts below get a chance to heal aseptically. Alcohol above or below the 60 or 70 per cent. strength does not act so well. (Jour. Med. Soc. of N. J.)

#### ART OF PRESCRIBING.

Dr. A. P. Luff, in the *British Medical Journal*, expresses his convictions that there is a growing practice which is rapidly threatening to undermine to a great extent what he considers to be the skilled and rational employment of thera-

peutic agents in the treatment of disease. He refers to the too general use of powerful drugs in compressed forms and of proprietary preparations. Undoubtedly lamellæ and tabellæ of active principles in the hands of medical men are most convenient and useful for hypodermic and occasionally for other forms of administration; but it is the ready facility with which powerful drugs prepared in this form are obtained by the public which constitutes a grave danger, a facility which is responsible to a great extent for the increasing practice of self-drugging. Equally bad is the use of some of the proprietary preparations which are so speciously puffed, and with the samples and laudatory advertisements of which physicians are so profusely deluged, tempting the medical man as they do to the enervating habit of thinking that the writing of an order for such a preparation is the writing of a prescription, and gradually rendering him absolutely impotent to exercise the true art of prescribing.

There is another aspect to this subject to which Luff directs attention. The practice of writing an order for a particular form of compressed drug, or for a proprietary preparation (he says he cannot dignify such an act as the writing of a prescription) is apt to encourage patients to recommend such proprietary articles to their immediate friends who in their opinion are suffering from similar symptoms or from what they imagine to be a similar complaint.

The factors which make for success in the art of prescribing as Luff lays them down are: (1) A sound acquaintance with the therapeutic uses of drugs. (2) A thorough knowledge of the doses of drugs. (3) The avoidance of the mixing of drugs that are incompatible. (4) The administration of drugs which are nauseous or distasteful in such form or combination as to be palatable to the patient. (Jour. Med. Soc. of N. J.)

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# NEWS AND THERAPEUTIC HINTS.

## CHRONIC GASTRITIS.

- R Liquoris strychninae (B. P.), miiij.  
Acidi hydrochlorici diluti, miv.  
Tincturae aurantii, f3ss.  
Glyceriti pepsini, 3j.  
Spiritus chloroformi, m x.  
Aqua, q. s. ad f3j.

M. Sig.: One dose three times a day after meals. (Lancet-Clinic.)

## DYSMENORRHEA.

S. W. Bandler states that, in addition to the use of tonics, hydrastis and viburnum prunifolium may be given for long periods. Apioi, 4 minims in capsules, several times a day, may be begun, a week or ten days before each menstruation. A valuable combination is the following:—

- R Tincture of gelsemium,  
Tincture of cannabis indica, aa f3iij.  
Compound tinct. of cardamom, q. s. ad f3iij.

This should be given in teaspoonful doses four times a day, beginning several days before the onset of menstruation. ("Medical Gynecology.")

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## NEWS AND THERAPEUTIC HINTS.

### ALUM IN HERPES.

George O. Williams, of New York, has found a saturated watery solution of alum practically a specific in herpes, applying it even to the conjunctiva or the cornea. The results have been most satisfactory. This is especially noteworthy in view of the fact that the applications ordinarily employed for herpes are of very little use. This very annoying and disfiguring malady usually runs its course unaffected by treatment. (So. Clinic.)

### FURUNCLE OF EAR.

G. Laurens, in Nouveaux remèdes, advises that a small, flexible wick of gauze be inserted in the canal and the patient be required to drop upon it every two hours a few drops of the following fluid, previously warmed:—

R̄ Hydrargyri chloridi corrosivi, gr. ⅔.

Alcoholis, m℥.

Aquæ destillatæ,

Glycerini, āā f̄ʒvj.

Misce. The gauze wick should be changed daily. (So. Clinic.)

### TINCTURE OF IODINE AND ICHTHYOL IN THE TREATMENT OF FURUNCLES.

M. Berger details this method of treatment as follows: In the case of soft furuncles these are painted with tincture of iodine, and then covered with a 10 per cent. ichthyol ointment. When pointing occurs the pus is evacuated and the surrounding skin is cleansed with benzine in order that fatty substances may be removed. The tincture of iodine is again painted on and the ichthyol ointment is again applied. As soon as suppuration has ceased the use of the iodine is discontinued, and applications of pure ichthyol are now made. Finally, if an extensive raw surface is left, the following ointment should be applied:—

R̄ Silver nitrate, Gm. 1.

Balsam of Peru, Gm. 5.

Lanolin, Gm. 100.

In the case of hard furuncles it is necessary to persist in the application of tincture of iodine, followed by that of pure ichthyol. The latter may be allowed to dry on, and may be left exposed, or may be covered by a compress of gauze. The following day the ichthyol is washed off with hot water and the application of iodine and then of ichthyol is repeated. This procedure is repeated from day to day. When suppuration occurs and drainage is effected, the use of the tincture of iodine is discontinued, but that of the pure ichthyol is kept up. (Medizinische Klinik.)

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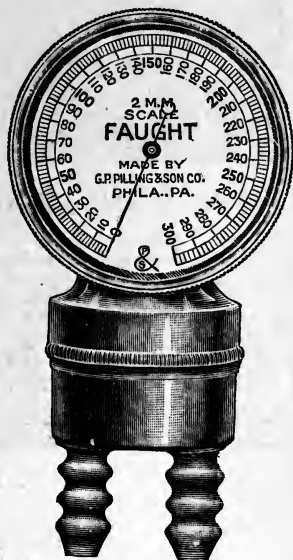


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## NEWS AND THERAPEUTIC HINTS.

### EPIDIDYMITIS.

R. Ichthyolis, f3vj.  
Ung. hydrargyri,  
Ung. belladonnæ, āā ʒiv.  
Cerati plumbi subacetatis, q. s. ad ʒij.

M. Sig.: Apply to scrotum freely twice or thrice daily, and support with large suspensory bandage. (Medical Brief.)

### UTILIZATION OF FRUIT STONES.

The seeds of stones of many fruits which would apparently seem useless have some economic value, and in this connection we are speaking chiefly of those which are often thrown away, passing over many that are applied to ornamental uses. In certain parts of Egypt the

date stones are boiled to soften them, and the camels and cattle are fed upon them. They are calcined by the Chinese, and are said to enter into the composition of their Indian ink. In Spain they are burnt and powdered for dentrifice, and vegetable ivory nuts are said to be applied to the same purpose. Some species of Attalea nuts are burned in Brazil to blacken the raw caoutchouc or india rubber. The seed or stone of the tamarind is sometimes prescribed in India in cases of dysentery as a tonic, and in the form of an electuary. In times of scarcity the natives eat them after being roasted and soaked for a few hours in water; the dark outer skin comes off; they are then boiled or fried. An oil has been obtained from this seed. The seed of the caro bean is ground up as food for cattle and is used in Algeria, when roasted, as coffee. (Health.)



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### NEWS AND THERAPEUTIC HINTS.

#### LABIAL HERPES.

℞ Tinct. benzoini comp., f3ij.

Balsami Peruv., 3j.

Petrolati, q. s. ad 3j.

Sig.: Apply several times daily. (Critic and Guide.)

#### TRANSMISSION OF SLEEP.

The recent experiments of the three eminent French physiologists, Claparè, Piéron, and Legendre, are worthy of attention. For their experiment they selected healthy dogs, and did not allow them to sleep. It was observed that prolonged insomnia becomes very serious; the animals can resist as much as ten days, but then die. They noticed also that if the experiment is interrupted for a few days before the tenth day, the dogs fall into a deep sleep, and that when they wake up they are in a bright, healthy condition. From one of those animals that had not been allowed to sleep they drew a few drops of blood or cerebrospinal fluid and injected it into the nervous system of a normal dog. The latter became suddenly extremely tired, closed his eyes and fell asleep. By this experiment the three

physiologists have proven that sleep can be transmitted from one organism to another. (La Riforma Medica, Naples; West. Med. Rev.)

#### EMPIRICAL REMEDY FOR ASTHMA.

C. Leclerc states that the magicians of Anam and Tonkin have for a long time employed in the treatment of asthma a substance obtained from the salivary secretion of sperm whales. The natives collect this secretion whenever one of these animals is caught. This secretion when dried is of a sticky and elastic consistency, of a grayish color, and of a slightly bitter taste. It is employed in doses of 1 or 2 Gm. per day. The remedy is called "long-duyen-huong." It quickly relieves an attack of asthmatic dyspnea. It causes no gastric derangements, but gives rise to a metallic taste which is similar to that produced by potassium iodide. The fact also that it lowers arterial pressure like potassium iodide leads the author to believe that "long-duyen-huong" owes its antispasmodic property in all probability to the presence of potassium iodide in organic combination. (Gazette des hôpitaux.)

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### NEWS AND THERAPEUTIC HINTS.

#### HAY FEVER.

The following treatment is advocated by Hoffmann. Eight days before the date of habitual recurrence he gives the following mixture:—

℞ Calcii chloridi,  
 Calcii lactatis, āā gr. lxxv.  
 Syrupi, f3vj.  
 Aquæ, q. s. ad f3vj.

M. et ft. mist. Sig.: A dessertspoonful three times a day.

Once fever has set in, the patient takes a dessertspoonful every two hours. The calcium salts raise the vascular tonus and diminish the excitability of the vasodilators. (Prescriber.)

#### ALOPECIA.

In the treatment of alopecia due to seborrhea Freshwater (Practitioner) recommends that, first of all, the scales be removed from the scalp, as they block the mouths of the hair follicles. The hair should be shampooed every evening with a spirit soap lotion and then thoroughly dried. Next the following ointment should be carefully rubbed into the entire scalp:—

℞ Acidi salicylici, gr. x.  
 Sulphuris præcipitati, gr. xxx.  
 Olei rosæ, ℥ij.  
 Adipis benzoinati, ʒj.  
 Misce. Ft. unguentum.

When the hair is light or gray, resorcinol, betanaphthol, empyroform, oil of cade, ichthyol, thiol, and tannic acid are drugs which should not be used. Massage should be carried out for at least twenty minutes each day. (Medical Review of Reviews.)

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## NEWS AND THERAPEUTIC HINTS.

### VOMITING IN CHILDREN.

If a child vomits incessantly, remember that a minute dose of morphine ( $\frac{1}{100}$  grain), alone or with atropine, will generally produce sedation. Meanwhile, clean out the bowels with small doses of calomel and with enemata. (So. Clinic.)

### SULPHUR OINTMENT IN DANDRUFF.

Brayton recommends in the Ind. Med. Jour. an ointment of 1 ounce of cold cream, 1 dram of precipitated sulphur, and 30 grains of salicylic acid as an excellent treatment for dandruff, and also for seborrheic dermatitis of the scalp and face. White precipitate ointment may be used for the limbs and trunks, and sulphur ointment for the scalp. (Jour. Med. Soc. of New Jersey.)

### MEDICINAL ACTION OF FOODS.

We find some interesting suggestions as to the therapeutic possibilities of foods. Thus, for instance, according to Buckland, onions, eaten at night, promote sleep, produce perspiration, and have a diuretic action. They are good for coughs and colds and an aid to gastric digestion. They are also credited with allaying the pains of rheumatism. These properties of the onion are ascribed by the writer to the sulphur contained, in the form of its sulphureted oil, the allyl sulphide.


The turnip, parsnip, and rutabaga contain a peculiar oily principle, which may account for their traditional value as aperients and diuretics, while their juices are an old-country remedy for coughs and hoarseness.

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Cabbage contains a sulphur compound, which may account for its alleged value in the treatment of scurvy and scrofula. Spinach acts as a laxative, and it also contains a peculiar principle, as well as considerable iron in organic form. The tomato contains a principle which, when taken in concentrated form, produces salivation and acts as a hepatic stimulant. On this account it has been called "vegetable mercury."

Carrots also are said to have a cholagogue action, and this humble vegetable is served at certain health resorts to patients suffering from derangements of the liver. Carrots have also been used as a local dressing, for the relief of pain. This vegetable contains a neutral principle, known as carotin, and a volatile oil, which may explain its traditional curative qualities.

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It need hardly be added, of course, that the foregoing remarks apply, not exclusively to the edible parts of the respective plants, but more or less to other portions, not utilized; or, also to the vegetable at some peculiar (sometimes irregular) period of its development. (Editorial, in the Lancet; Charlotte Med. Jour.)

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No. 10

## Department on the Internal Secretions

### Original Articles and Summaries of Selected Articles

#### EXOPHTHALMIC GOITER AND DIABETES.\*

By PAUL SAINTON, M.D., AND PAUL GASTAUD, M.D.,

PARIS, FRANCE.

THE authors have met with 3 instances of diabetes among 90 cases of exophthalmic goiter, and after an extensive search in literature have found altogether 60 cases presenting this combination of conditions. They estimate the frequency of diabetes in exophthalmic goiter as 3 in 100 cases. It is undoubtedly a fact that diabetes occurs much oftener in cases of hyperthyroidism than among patients with hypothyroidism, in which it is quite rare, as Parisot has shown.

Clinically, diabetes occurring in the course of Graves's disease is manifested in two ways, viz.: (1) as a temporary or slight glycosuria, with the usual symptoms of diabetes only present in a trifling degree; (2) as a well-established condition, with all the characteristic symptoms present, the latter frequently even dominating the clinical picture as a whole. In the first group of cases slight thirst, or a slight increase in appetite, or a feeling of weakness is at times responsible for the examination of the urine which leads to the discovery of the glycosuria. The amount of sugar excreted may be small, *e.g.*, 3.4 to 5 Gm. in one of the author's cases, with a total daily urinary output of 1500 c.c. In the second class of cases, on the other hand, the diabetic disorder is unusually severe, 8 to 14 liters being sometimes excreted daily, and the amount of sugar eliminated ranging from 340 to 1000 Gm. a day, or even attaining higher figures, such as are hardly met with in any cases other than those of pituitary diabetes. Polyphagia, polydipsia, and

\* Summary of article in Bulletin médical, July 23, 1913.

other symptoms are pronounced. It seems to be a uniform rule that in severe cases of Basedow's disease severe diabetes exists, while in mild Basedow cases slight and evanescent glycosuria occurs. In most cases diabetes appears as an epiphenomenon in the course of exophthalmic goiter, and a long time after its onset. Where both conditions have become established, a state of equilibrium seems to occur between them, viz.: when the Basedow condition becomes worse the diabetes improves, and *vice versa*. The prognosis varies in different cases. Mild diabetes in Basedow cases runs a course quite like that of arthritic diabetes, presenting the same intermissions and low degree of intensity. In severe forms, on the other hand, the combination of the two diseases constitutes a condition of exceptional gravity. In the series of cases collected by Sattler, 25 patients rapidly succumbed—7 of them in coma. Sometimes, as in one of the author's own observations, pulmonary tuberculosis is superadded, further aggravating the prognosis and hastening death.

The combination of diabetes and exophthalmic goiter may be complicated by other syndromes, as in the cases reported by Lancereaux, Henrot, and Murray, in which acromegaly was added to form a triad of conditions. In a case of Rennie the third component of the triad was myasthenia gravis. In one of the author's own cases myopathic and osseous disorders, the latter of the type of Paget's disease, rendered the interpretation of the symptoms singularly difficult. In diabetic Basedow cases of the female sex signs of ovarian insufficiency are at times noted; in one patient the menstrual period was clearly instrumental in causing glycosuria either to reappear or to become more marked.

On the whole, the association of Basedow's disease and diabetes cannot be considered a fortuitous phenomenon. That a bond of some kind unites the two conditions can readily be shown. Their mutual relationship is brought to light when one sees exophthalmic goiter and diabetes alternate in the different members of the same family. Manby has reported 3 striking instances of this. In one family, the father and brother of a Basedow patient are diabetic; in a second, the sister of a Basedow patient is diabetic, and her brother's two children have been carried off by acute diabetes. In the third instance, the two sisters of a Basedow patient succumbed to diabetes at the ages of 9 and 10, respectively. In a case of Pibrane, and in one of the author's, the father of the Basedow patient was diabetic. Finally, in still another case the patient's aunt had diabetes and her cousin exophthalmic goiter. The inverse relationship in the severity of the two disorders in the same individual, already referred to, is also evidence in favor of their mutual dependence.

What is the mechanism of this diabeto-Basedow syndrome? Pathology as yet yields only incomplete testimony in this connection. A systematic study of the ductless glands in such a case has never been conducted. The lesions mentioned as having been found have been as follows: (1) In several cases the liver showed slight fatty changes; (2) the condition of the pancreas varies; in Murray's case it showed marked sclerosis and disap-

pearance of the islets of Langerhans, while in those of Sougues and Marinisco and of Lépine it appeared normal. In the observations of Henrot and Murray, where acromegaly was superadded, the pituitary was enlarged; in the others its condition was not noted.

In spite of the lack of evidence, the pathologic physiology of Basedowian diabetes can be at least tentatively conceived. Glycosuria of thyroid, adrenal, and pituitary origin are known to occur, though their precise relationships to the pancreatohepatic apparatus cannot be stated. The first thought coming to mind upon seeing diabetes appear in a case of exophthalmic goiter is that it is dependent on the excessive thyroid functioning. The following facts are in favor of this idea: Clinically, thyroidism brought on by thyroid feeding has been observed to induce glycosuria in a number of subjects, whether myxedematous (cases of Bécclère and Ewald) or obese (cases of Notthaft and von Noorden). Basedow symptoms and glycosuria even appeared simultaneously in Notthaft's case following the ingestion of thyroid gland. In the period when patients with exophthalmic goiter were treated with thyroid gland, temporary glycosuria was not infrequently observed. Even, at times, there supervened a full-fledged diabetes, as F. Müller reports, his patient having died in coma. Thyroid treatment thus brings about intolerance of carbohydrates, at least in a certain category of individuals (obese, myxedematous, and with exophthalmic goiter). In healthy human subjects and in the lower animals attempts have been made to demonstrate this intolerance by the test of alimentary glycosuria; likewise in Basedow cases. The results, however, have been contradictory. In the animals they were inconstant. Among 20 normal human subjects Bettmann noted prompt passage of the sugar into the urine 11 times, while Strauss and Marwin observed it only in barely 5 per cent. of the cases. Among Basedow cases, whereas Krauss, Chvořtek and Hirschl, and von Noorden found the test positive in half their cases, Diénot, Goldschmidt, Strauss, Rathery, and the authors observed this less frequently—at most in about 15 per cent. of the cases. Likewise in favor of the thyroid theory are the lesions of this gland noted by Carnot and Rathery in diabetics and the improvement reported by Lorand in cases of diabetes upon administration of sera from thyroidectomized animals.

Summarizing the above facts, the conclusion cannot be escaped that the participation of hyperthyroidism in the production of diabetes is extremely probable.

Other glandular theories may, however, be put forth, and these must be passed in review. Among them is the adrenal theory. Cases in point are uncommon, and the authors know of but one instance in which a patient afflicted with both exophthalmic goiter and Addison's disease showed temporary glycosuria (personal case). Discussion of the possibility of participation of the adrenals in such a glycosuria is rendered necessary by the fact that the Vienna school (Eppinger, Falta, and Rüdinger; Eppinger and Hess; Krauss and Friedenthal; Asher) maintains the thyroidoadrenal origin of exophthalmic goiter. This theory is based on the relations sup-



posed to exist between the thyroid, pancreas, and chromaffin system. In hyperthyroidism there would occur inhibition of the pancreas and stimulation of the adrenal function. The theory offers a plausible explanation of the clinical association in question, it being merely necessary to conceive that, by reason of the pancreatic and thyroidoadrenal antagonism, the disturbance of pancreatic function might extend to complete suppression of glycogenesis. This theory is widely discussed. It has not been proved, indeed, that an increase of adrenal secretion takes place in Basedow's disease; epinephrin is not constantly present in such cases; finally, the association of hyperthyroidism with Addison's disease is hardly in favor of this conception. Basedow cases, moreover, do not show any constant change in the blood-pressure. True, Asher has noticed that in certain subjects with thyrotoxicosis the injection of  $\frac{1}{4}$  to  $\frac{1}{2}$  mg. of epinephrin leads to glycosuria. Further investigation is required, however, to confirm the validity of this test. Thus, on the whole, it is difficult to establish the responsibility of the adrenals in the production of diabetes among Basedow cases.

Such is not the case, however, when one looks up a possible rôle of the pituitary in this direction. The reported cases of coincident exophthalmic goiter, acromegaly, and diabetes afford firm support for this theory. Even clinically, there is a marked resemblance between the severe Basedowian diabetes cases and cases of pituitary diabetes. Pituitary diabetes may show itself in the absence of acromegaly. All authors are agreed that it is due to hyperpituitarism. Claude and Baudoin, in a series of researches, found that in a certain proportion of subjects,—arthritic and obese cases,—after meal-time alone, glycosuria appeared after the injection of pituitary extract. Comparison of these cases with those of glycosuria following thyroid treatment in obesity is of interest in this connection. Clinically and experimentally, there is thus a considerable analogy between Basedowian diabetes and glycosuria, on the one hand, and pituitary diabetes and glycosuria, on the other.

From the above it seems justifiable to assume that in diabetes coupled with exophthalmic goiter two internally secreting glands may be tentatively held responsible, viz., the thyroid and the pituitary. Can one conceive that these two influences are simultaneously operative in the production of Basedowian diabetes? Such a combination seems not unlikely, in view of the close functional synergism existing between the two organs named. As for the more precise mechanism of the glycolytic process taking place, the question arises whether the hypophysis and thyroid cause, through insufficiency in their functions, some disturbance in virtue of which the sugar is no longer retained in the liver. If they act through the pancreas, is this action exerted through the intermediation of the sympathetic system or through a hormone? These are further problems in general pathologic physiology which the association of diabetes with exophthalmic goiter brings up for future solution.

**ADRENAL VIRILISM.\***

By PROF. TUFFIER,

PARIS, FRANCE.

UNDER the term adrenal virilism is to be included a group of disorders in somatic development characterized either by precocious virility in the child or by the assumption of a masculine appearance by a woman, even after the menopause, under the influence of a tumor or secretory disturbance of the adrenals. The author presents the following example of the second variety:—

A woman of 62 years was admitted on Dec. 16, 1913, for abundant metrorrhagia. Full-blooded and sturdy, she showed upon examination all the physical signs of a large fibroma; but surgical intervention was contraindicated by the 70 Gm. of sugar found in the patient's urine. A striking feature of the case was an unusual hirsuties. After treatment for her glycosuria the patient was readmitted on Jan. 19, 1914, showing only 6 Gm. of sugar in the urine and being in a favorable state for operation. At this time she was observed (not having shaved for some time) to have an extensive black beard and mustache. There was slight exophthalmos. There was baldness of the frontoparietal regions,—a condition almost exclusively seen in men. The pitch of the voice and the conformation of the limbs, which showed a high degree of muscular development, as well as their relative length, were altogether of the masculine type. On the forearms and hands yellow spots, almost confluent, were to be seen. The clitoris was found enlarged, measuring about 4 cm., and was covered by a well-developed prepuce.

Inquiry from the patient elicited the fact that these unusual physical features had developed since the menopause, and photographs taken before that period showed this to be true. Her habits were also changed; she was now occupied exclusively with manual tasks such as ploughing and hoeing, which caused her no fatigue. In the patient's previous history nothing unusual was found except that she was one of a pair of twins. She had never borne a child and presented no evidence of any previous organic affection. The thyroid gland was normal. The blood-pressure (Pachon instrument) was 200 mm. (systolic). The cerebrospinal fluid was normal and issued from the needle drop by drop. No signs of increased intracranial tension were present, and papillary stasis proved absent upon examination of the retina. Upon X-ray examination the sella turcica appeared normal. The pelvis was of the female type.

Upon operative intervention a condition perhaps the cause of the patient's peculiar bodily features was found. Celiotomy on Feb. 3, 1914, led to the discovery of a uterus of the size of a fetal head, formed by mus-

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\* Summary of article in Bulletin de l'Académie de Médecine, May 26, 1914.

cular bundles similar to those of pregnancy. A subtotal hysterectomy was done, followed by uninterrupted recovery and by complete cessation of the glycosuria within three months after the operation. Examination of the region of the adrenals during the celiotomy revealed there a bilateral mass equal to the half of a kidney in size, situated over the adrenal bodies, and of a fibrolipomatous consistency.

Study of the tissues removed at the operation showed the left ovary atrophied, the right ovary, however, exhibiting a tumor of the size of a large walnut. The uterus was as large as though four months pregnant. Split in the median line, it showed no fibroma or tissue sclerosis, but muscular bundles of the size met with in pregnancy; the mucous membrane was unaltered. This combination of a simple hypertrophy of the uterus with metrorrhagia in a woman of 62 was already suggestive. The ovarian tumor was found soft, hemorrhagic, and devoid of vegetations or cysts, and presented an appearance not previously met with by the author. After protracted discussion, and after having for a time believed that the tissue represented an aberrant adrenal body, it was finally decided to constitute a neoplasm originating in the ovary itself from the lutein cells.

The aggregate of this and similar cases represents a clinical type, already known to the ancients, designated as hirsutism by Appert and as adrenal virilism by Gilbert Ballet and Gallais. Met with chiefly in female children, its signs are remarkably uniform. Hypertrichosis of masculine type is the most constant sign, having been recorded in 30 out of 32 cases; muscular hypersthenia is also the rule, even in adults. Hypertrophy of the external organs of generation has been found in 40.62 per cent. of instances.

This excessive functioning of the adrenals is differently manifested according to the age of the patients. In children it greatly accelerates growth, as in a case of Dun, where a child 5 years old appeared to be 14, with hypertrichosis, more especially on the back and in the genital region. In Walker's case a girl of 7 had the stature of a man of 20 and showed hairy development resembling that of an adult male. In a case of Herbert a child only 18 months old began to show hypertrichosis. Results are far different in adults, and especially after the menopause, when the associated metabolic changes can influence only certain organs, and produce merely hypertrichosis, hypersthenia, and hypertrophy of the reproductive organs.

Between the extreme case above reported and the normal condition there must exist a transition series of cases of biologic deviation due to adrenal changes. Recognition of these should be practicable in clinical medicine. The manifestations of virilism should draw attention, in a given case, to the possible presence of an adrenal tumor which, thus early detected, may be successfully dealt with.

**OPOTHERAPY IN CHRONIC OSTEOARTHRITIS.\***

By PERCY WILLARD ROBERTS, M.D.,

NEW YORK, N. Y.

THE essentials of treatment followed in the author's cases of chronic osteoarthritis were the administration of glandular preparations, rest, a diet reducing the intake of calcium, and the use of the d'Arsonval or bipolar high-frequency current. Of the glands which have a direct influence upon nutrition, he points out, three stand out in clearly defined prominence, viz., the thymus, the thyroid, and the pituitary, each of which has its place in the treatment of osteoarthritis. It should be borne in mind that no single one of these glands meets all the requirements of a regulator of metabolism under all conditions.

The thyroid, most widely known, is least often indicated in osteoarthritis. It is seldom of value alone, but may be useful in conjunction with other glands where there has been a recent marked increase in weight. When given it should be carefully carried to physiologic limits and the dose then considerably reduced and continued at that point over a long period.

Thymus gland has longer stood the test than the others. It is slow in action, but undoubtedly has a beneficial effect upon the course of osteoarthritis, whether of the metabolic type described by Nathan and in which it was first used, or in the chronic conditions following low-grade infections. It should be given in doses of 10 or 15 grains, three times a day, over a period of many months. It is contraindicated only in cases in which there has been a rapid increase in weight, as at times it stimulates general nutrition to an unusual extent. The gland deteriorates rapidly; therefore, fresh preparations are essential. The powder, sealed in capsules at the laboratory, is perhaps the most reliable form for administration. The powder dispensed in bulk is of very uncertain strength. Disappointment in the use of thymus is frequently due to its slow action. It should not be abandoned before six months of continuous use.

Pituitary body has shown some very encouraging results, Wallace having used 1 per cent. and 2 per cent. solutions of the whole gland intramuscularly with the result, in many cases, of striking improvement in pain and joint swelling. The dose is 1 c.c., injected daily, using a 1 per cent. solution for two weeks and then a 2 per cent. solution. Urinalyses should occasionally be made for sugar, and the blood-pressure should be observed from time to time. Tablets of the whole gland will sometimes effect the same results as solutions, but are apparently not quite so dependable. The posterior lobe alone does not seem to have any decided influence upon joints, but the writer has used capsules of powdered anterior lobe, sealed at the laboratory, with beneficial effect. The anterior lobe used in conjunction

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\* Summary of article in the Medical Record, May 9, 1914.

with thymus appears to have a greater influence than thymus alone. The dose is 2 grains, three times a day, in capsules which have been sealed at the laboratory.

## PATHOLOGIC CHANGES OF THE THYROID IN DISEASE.\*

By RUPERT FARRANT, F.R.C.S. ENG.,

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THE object of the author's paper is to point out those diseases and toxemias that do, and those that do not, produce an alteration in the thyroid, to describe these changes, to compare them with those seen in goiter, and to note when they become associated with signs of thyroid excess. His work was based on some 700 thyroids obtained from post-mortem examinations during the preceding five years, together with some from guinea-pigs after inoculation. From the observations made it was found that the thyroid changes produced are dependent on the amount, virulence, and duration of the toxemia. The diseases and toxemias may be divided into three groups; in the first are those that produce no effect on the thyroid, in the second those that produce a colloid hyperplasia, and in the third those that cause a complete or acute hyperplasia.

### *Group 1. Diseases that Produce No Effect.*

Bacilli: Typhoid.

Cocci: Gonococcus (?), pneumococcus, staphylococcus aureus, staphylococcus albus, streptococcus equinus, streptococcus faecalis, streptococcus puerperalis, streptococcus rheumaticus, acute surgical infections.

Protozoa: Coccidiosis.

Diseases due to unknown micro-organisms: Polyserositis, carcinoma, sarcoma.

Gland diseases: Addison's disease, diabetes, jaundice.

Blood diseases: Lymphadenoma, lymphatic leukemia.

### *Group 2. Diseases that Induce a Chronic or Colloid Hyperplasia.*

Bacilli: Coliform (chronic in man), tuberculosis (chronic).

Cocci: Micrococcus melitensis (goats), meningococcus (slight).

Protozoa: Syphilis (tertiary).

Streptothrix: Actinomycosis.

Diseases due to unknown micro-organisms: Acute anterior poliomyelitis, rheumatic fever, scarlet fever.

Gland diseases: Chronic nephritis.

Blood diseases: Pernicious anemia.

### *Group 3. Diseases that Produce a Complete or Acute Hyperplasia.*

Bacilli: Aërogenes capsulatus (?), anthrax, coliform (acute, guinea-pigs), diphtheria (man), diphtheria toxin (horses, guinea-pigs), dysentery (sylum), dysentery (Flexner), dysentery (Shiga), Gaertner, mallei, tetanus, tuberculosis (acute).

Cocci: Micrococcus catarrhalis.

Protozoa: Syphilis (secondary), malaria.

\* Summary of article in the Lancet, March 7, 1914.



Diseases due to unknown micro-organisms: Measles, broncho-pneumonia, small-pox, whooping-cough.

Gland diseases: Chronic nephritis, cirrhosis of liver.

Artificial toxemias: Abrin, ricin, diphtheria toxin.

From tuberculosis it was concluded that the toxemias of Group 3, when mild in character, may produce a colloid instead of a complete hyperplasia; but that no alteration in Group 1 can enable them to have the effect of either Group 2 or 3.

Diphtheria may be taken as an example of the acute toxemias that act on the thyroid. The stages of the production of acute hyperplasia were illustrated by 4 thyroids taken from cases dead on the fourth, seventh, seventh, and twelfth days. The colloid becomes granular and then finally disappears, the walls of the vesicles become infolded, the outline indistinguishable, and the cells columnar in shape. The thyroids of the acute infections can be arranged in order; the degree of hyperplasia corresponds to the duration of the disease.

The involution of acute hyperplasia can be seen from specimens obtained after injection of sublethal doses of toxin or micro-organisms into guinea-pigs and of diphtheria toxin into horses. The vesicles are re-formed by the direct transformation of the cells into colloid; they are small at first, but as fresh colloid is formed they enlarge and the cells become flattened; extravasated blood is transformed into fibrous tissue. At the termination of the process there is destruction of tissue with fibrosis. The fibrosis is the most marked feature after an acute hyperplasia, but excessive colloid formation after complete hyperplasia.

*Production of Colloid Hyperplasia.*—A complete thyroid circle can be traced over a period of years in cases of tuberculosis. Six thyroids were demonstrated on one slide and the contrast shown of the complete hyperplasia produced by miliary tuberculosis and of the colloid hyperplasia by the chronic. Three stages may be described in colloid hyperplasia: in the first the vesicles are small in size and the colloid coarsely granular, with cell proliferation; in the second the vesicles are of unequal size and packed with colloid; the cell proliferation is squeezed up between them; finally, the thyroid becomes cirrhotic, with deficiency of thyroid tissue. Colloid hyperplasia is found in three separate conditions: during the involution after an acute toxemia, during the production, and during the involution after chronic toxemia.

*Comparison with Goiter.*—There are two main differences between the hyperplasias of the toxemias and those of goiter: (1) the hyperthyroidism of exophthalmic goiter when compared to the complete hyperplasias of the toxemias; (2) the alteration in size seen in endemic goiter as compared to that of the chronic toxemias.

*Repeated and Double Toxemias.*—Repeated injections of diphtheria toxin lead not only to the production of thyroid hyperplasia, but also to the formation of antitoxin. From observations on 15 horses it was found that the hyperplasia decreased as the antitoxic value of the serum increased.

This can be applied to the extent of saying that it is probable that the toxemias that are counteracted by the formation of antitoxin only produce a thyroid hyperplasia when antitoxin is absent or deficient. Guinea-pigs were inoculated with a second toxemia before recovery was complete from the first; it was found that there was an increase in the hemorrhagic hyperplasia. The supervention of miliary tuberculosis on chronic is an instance of an acute toxemia acting on a chronic; the extreme hyperplasia produced in such a case was shown; the case developed exophthalmos before death. Cirrhosis of the liver is an example of a subacute toxemia that develops on a chronic at the onset of ascites; exophthalmos was present in 10 out of 12 cases. Barker and Levison have noted the occurrence of exophthalmos in cases of interstitial nephritis. These examples of the occurrence of exophthalmos are of importance in that they serve to bridge over the gap between the thyroid changes and hyperthyroidism of the toxemias and those of goiter. These considerations enable one to trace the effect of the diseases on the thyroid from birth upward, and lead to the prevention, production, and cure of certain thyroid conditions.

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### THE ASSOCIATION OF UTERINE GROWTHS WITH GOITER; TYPICAL AND ATYPICAL EXOPHTHALMIC GOITER.\*

By HENRY L. ELSNER, M.D.,

SYRACUSE, N. Y.

THE unusual frequency of uterine growths with thyroid abnormalities, more particularly with the various forms of goiter, typical and atypical exophthalmic goiter, is pointed out by the author. Among the case histories presented to support his contentions is one including sensory symptoms, analgesia, thermoanesthesia, the typical picture of syringomyelia, cystic ovary, uterine fibromyoma, goiter, acromegaly, granuloma, trophic changes, invasion of the sympathetic system, multiple cutaneous pigment deposits, fibroid growths, and urinary anomalies. The patient was a housewife aged 52 years; weight, 242 pounds; normal weight, 150 pounds. Twenty-one years before, she had noticed a peculiar sensation in the index and middle finger of the right hand, later extending into both arms, so that finally both hands were more or less numb, and there was occasionally cramping. Twelve years before, the diagnosis of uterine fibroid had been made; later it was found that she had a large ovarian cyst, with a fibroid uterus. Five years before, the cyst, weighing 28 pounds, had been removed, and also the fibroid uterus. She menstruated but once after the operation. One year after the operation her hands became analgesic and thermoanesthetic. Three years before she was seen, the characteristic growth of acromegaly had

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\* Summary of article in the American Journal of the Medical Sciences, May, 1914.

become noticeable. The greater changes were in the small bones of the face, including the jaw; also in the hands and feet. The tongue was enormously thickened, broadened, and when protruded covered an unusually large area, and was  $3\frac{1}{2}$  inches broad. Just back of the upper teeth, springing from the buccal mucosa, was a large granuloma. Almost immediately after the operation a double goiter developed, larger on the right side than on the left, both lobes presenting a prominence about the size of a grapefruit. Perspiration was excessive and erratic. She was very much depressed; pulse, 88; respirations, 18; temperature,  $98.2^{\circ}$ ; blood-pressure between 90 and 100 mm. Hg (systolic). The prompt development of the goiter after the surgical operation in this case was stimulated unquestionably by the removal of the organs of generation. There was also noted invasion of the kidneys, probably as a limited parenchymatous nephritis, with an unusually high uric acid content of the urine, while the urea was comparatively low. With these conditions there was a gradually increasing arteriosclerosis.

There is a decided tendency to disregard atypical cases of exophthalmic goiter, and they often remain unrecognized. Cautious clinical study proves the frequency of what Stern has called Basedowoid cases. These are atypical, but they include a sufficient number of typical symptoms to justify the diagnosis of thyroid perversion. There are a large number of cases associated with distant changes in which there are but one or two symptoms of thyroid disturbance. These cases justify the conclusion that much of the ill health of the patient is due to perverted secretion. A study of thyroid disease emphasizes the fact that there are periods of latency during which there are practically no symptoms save a goiter, large or small. These periods are followed by exacerbations, including positive symptoms of hyperthyroidia, and, in some, marked changes in the arterial tree. The author has seen a number of cases of suddenly developing thyroid perversion, with associated uterine growths, in patients who had gone to middle life and far beyond without subjective disturbances, and in which the sudden onset of symptoms entirely ungeared the patient.

It may be positively assumed that in the presence of goiter, whatever the previous history may have been, symptoms may suddenly develop referable to such growth; some of these cases may lead to acute and serious cardiac insufficiency, in others to paroxysmal seizures, and in the third class of cases to continuous symptoms of thyroid perversion.

The hereditary tendency in goiter and the uterine myomas is often striking. The author has 2 sets of cases of this combination of lesions. One series was found in a family of 7 daughters, in which a number of aunts and cousins on the father's side had goiter. The mother of the 7 daughters presented a negative history so far as goiter and uterine growth were concerned. Of the 7 daughters, 6 had palpable uterine myomas, and 5 had had hysterectomies performed. Four of the 6 sisters had palpable and prominent goiters; 1 required thyroidectomy after hysterectomy. In the second series of cases there were 2 sisters, the daughters of a mother who had a large goiter, both suffering from typical exophthalmic goiter. In both the uterus was the size of a large grapefruit, and was fibromyomatous.

The influence of the removal of the goiter upon the uterine mass is practically negative. In none of the cases seen did thyroidectomy or ligation of the thyroid artery show the slightest influence on the size of the uterine growth or the symptoms dependent upon its presence.

In some cases there were found multiple fibroid growths in various organs of the body. In one there were multiple pigment deposits in the skin covering the thorax and abdomen, and a large crop of pedunculated cutaneous fibroids.

The symptoms dependent upon the uterine growth with thyroid enlargement are variable, and not materially different from those associated with the uncomplicated cases. In the presence of thyroid enlargement and uterine growths operation on one of these organs does not materially influence the progress of the growth in the other, nor the associated symptoms, save as the general condition of the patient is improved by the removal of an impediment and the source of toxemia.

A large number of uterine growths are associated with tachycardia and other circulatory anomalies. In some of these cases there is a palpable thyroid; in others no evident enlargement of the gland. In some an apparently normal thyroid may become tender and slightly enlarged during the presence of tachycardia. There may be localized tenderness, with slight enlargement of one lobe of the thyroid. In all of these cases one must investigate cautiously to determine the factor which has ungeared the circulatory system. In the presence of several of the symptoms of hyperthyroidia or perverted functions and the absence of other causes, though there is no evident goiter, the author would favor strongly the thyrogenous origin of the tachycardia.

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## CLINICAL STUDIES ON THE CURATIVE ACTION OF LEUCOCYTE EXTRACTS IN INFECTIVE PROCESSES.\*

By PHILIP HANSON HISS, JR., M.D.,

AND

JAMES GARFIELD DWYER, M.D.,

NEW YORK, N. Y.

In many infections the ultimate weapons of defense of the system are the leucocytes, either in their normal state, acting as phagocytes, or possibly when breaking down in the circulation or in exudates. In 1908 Hiss investigated the effect of leucocyte extracts on infections artificially produced in animals and, with Allen and Zinsser, tested the extracts on human patients suffering from various infections. The conclusion drawn from these tests

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\* Summary of article in the Medical Record, Sept. 13, 1913.

was that leucocyte extract is an aid in overcoming infections due to such organisms as streptococci, staphylococci, the pneumococcus, meningococcus, and even other infections in which the leucocytes are not known to play such an important part in the resistance offered by the system. Later, Dwyer published a clinical report of 6 cases thus treated, and attributed the success attained in them to the influence of the extract.

The method of obtaining these substances is as follows: Rabbits, of 1500 Gm. weight, or heavier, receive intrapleural injections of aleuronat. This is prepared by making a 3 per cent. solution of starch in meat-extract broth, without heating, and adding to this, after the starch has gone into thorough emulsion, 5 per cent. of powdered aleuronat. This is thoroughly mixed, boiled for five minutes, and filled into sterile potato tubes, 20 c.c. into each tube. Final sterilization is effected preferably in an autoclave. The rabbit injections are carried out by injecting 10 c.c. into each pleural cavity in the intercostal spaces at the level of the end of the sternum, in the anterior axillary line, great care being exerted to avoid puncturing the lungs. The rabbits are left for twenty-four hours, at the end of which time a copious and very cellular exudate will have accumulated in the pleural cavities. After killing the animals, this is removed by opening the anterior chest wall under rigid precautions of sterility, and pipetting the exudate into sterile centrifuge tubes. Immediate centrifugation before clotting can take place then permits the decanting of the supernatant exudate fluid. To the leucocytic sediment is then added about 2 c.c. of sterile distilled water, and the emulsion is thoroughly beaten up with a stiff bent platinum spatula. Smears are now made on slides, stained by Jenner's blood stain, and examined for possible bacterial contamination. It is well also to take cultures. Sterile distilled water is then added to each tube, about 10 volumes to 1 volume of sediment, and the tubes are set away in the incubator for seven or eight hours. At the end of this time the sterility is again controlled, and further extraction in the refrigerator continued until the extract is used. The preparation appears to remain active indefinitely. Before use it is thoroughly shaken to disseminate the sediment, which is then drawn into the syringe and injected along with the fluid into the animal or patient.

Since their earlier reports the authors have treated a series of over 300 patients suffering from various infections. In the present paper the results obtained in erysipelas are alone considered.

The series of erysipelas infections treated comprised 148 cases of all types and grades of severity. The majority of the infections were secondary to operative measures, while the others were of the so-called idiopathic form. The great majority were of the most severe type, the ordinary remedies having already been tried, and the infection being well established and the systemic symptoms marked.

The results obtained were so constant and marked that, judging from them, it would seem that in this disease one can almost prognosticate the results following the use of leucocyte extract. In every case there was a marked reaction, in most cases shown by a fall in temperature and a rapid



improvement in the general condition. In practically all the cases the symptoms disappeared within a few hours following the first injection of the extract; the headache, nausea, and vomiting disappeared, the mind became perfectly clear, and from a depressed, apprehensive state the patient passed into one of comparative comfort, free from anxiety. The effect on the temperature varied with the class of patient and with the time elapsed between the onset and the beginning of treatment; in those treated early—within twenty-four or forty-eight hours of the onset—there was a sharp fall in the temperature curve and the disease ended practically by crisis; the accompanying symptoms disappeared and the rash ceased to spread. In the cases treated later in the course of the disease there was not usually so marked an effect on the temperature, but the change in the general condition was just as marked, and the disease cut short.

Locally, in all cases, whether treated early or late, the burning and aching pain disappeared in a few hours. There was generally some further spreading, but the character of the lesion changed. The vivid crimson rash usually seen in an otherwise healthy patient soon faded. The dull purplish rash, seen in the deeper erysipelas infections or in the asthenic type of patient, soon gave way to the bright crimson form, and this in turn faded away gradually. In the latter class of patients, where a severe infection was present with the corresponding systemic symptoms and a low temperature curve, a moderate rise of temperature at times occurred after the infection. This was looked upon as a favorable sign and as an evidence of increased resistance.

The duration of an average case of erysipelas under the routine measures of treatment is about ten to fourteen days. In the author's series of cases the average duration, whether treatment with the extract was instituted early or late, was three and one-tenth days after treatment was begun.

In practically all cases, following the use of the leucocyte extract, had it not been for the mere physical presence of the disease focus, the patient would have been considered well. The extract took the place of all stimulation, and patients suffering from the most severe infections were kept entirely comfortable by its use alone. Most of the infections were complications of operations on the eye, ear, nose, and throat. Under the treatment used the healing, instead of being delayed as usual, was hastened, and was complete in a much shorter time than in an uncomplicated case. This refers especially to mastoid wounds, and is directly contrary to the usual experience with such wounds, where often following erysipelas it is necessary to do a secondary operation to clean out the flabby, unhealthy granulations.

Adrian Lambert has treated about 50 cases of erysipelas with extract supplied by the authors. His conclusions are as follows:—

1. Leucocyte extract will abort infections that are treated with it within the first forty-eight hours.

2. It will ameliorate the course of older infections and may abruptly terminate them. The longer the infection has existed, the less likely is the latter to take place, but the measure tends to shorten the course of the disease.

3. The toxic symptoms, delirium, headache, nausea, and vomiting, are modified and relieved; local pain is lessened.

4. The rash does not disappear immediately, but is apt to be localized.

5. Spreading intractable lesions of the back and body are apparently affected as readily as those occurring on the face and head.

6. Pus formation is aborted and sequelæ are rare, if they occur at all. About 50 per cent. of babies under 1 year of age recovered from erysipelas.

STATISTICAL ANALYSIS OF Erysipelas Cases. (*Hiss and Dwyer.*)

Age of Patient	No. of Cases	Time of Treatment	Average Duration of Treatment	TERMINATION OF CASES	
				Recovery	Death
Infants (up to 1 year) .....	...	Early* 5	4 days	3	2
	12	Late 7	6 "	5	2
Children (1 to 15 years) ...	...	Early 5	1.5 "	5	
	14	Late 9	3 "	9	
Adults (15 to 50 years) .....	...	Early 44	2.2 "	44	
	110	Late 66	3.5 "	66	
Over 50 years .....	12	Early 5	1.5 "	5	
		Late 7	3.7 "	6	1
Total .....	148	Early 59	2.3 "	57	2
		Late 89	4.05 "	86	3

\* Early—Treatment begun within 3 days of appearance of lesion.

Late—Treatment begun later than 3 days after appearance of lesion.

RECAPITULATION.

Total number of cases treated = 148; recovered = 143; mortality = 3.39 per cent.

General average duration of treatment = 3.18 days.

Number of recoveries in patients under 1 year old = 8 out of 12.

Mortality among patients over 1 year = 0.73 per cent.; recoveries = 99.27 per cent.

HYPOTENSOR ACTION OF CERTAIN EXTRACTS OF THE PITUITARY.\*

By HENRI CLAUDE, M.D., AND RENÉ PORAK, M.D.,

PARIS, FRANCE.

THE cardiovascular actions of pituitary extracts are less constant than those of adrenal extracts, with which they have been compared. Scymonowicz has shown that the increase of blood-pressure produced may be preceded by an initial stage of lowered pressure, while Schäfer, Halliburton, and others have observed that upon giving repeated injections of pituitary

\* Summary of article in *Presse médicale*, January 10, 1914.

extract the blood-pressure-raising effect of the latter disappears and is often replaced by a lowering of the pressure. These observations tend to show that, besides blood-pressure-raising substances rightly or wrongly assimilated to epinephrin, there may exist in pituitary extract substances that lower the blood-pressure.

In general, glandular extracts consist of a complex mixture of substances intended for secretion and of organic products originating from the glandular tissue. The functional activity of a gland may, therefore, be masked through the toxic effect produced by the organic products, and this accounts for the conflicting descriptions to which study of the glandular extracts has given rise. Gley has strongly emphasized these facts, describing, for example, phenomena of crossed anaphylaxis which show clearly the presence of like toxic substances in different glandular extracts (these phenomena consisting of rapid immunization to one organ extract by an extract from another organ). Organotherapy can henceforth progress only by giving up whole extracts of organs in favor of the products secreted by the organs. This end may be attained either by collecting the blood issuing from the internally secreting glands—a method generally difficult, and in particular as regards the hypophysis—or by resorting to chemical procedures having as their aim to isolate from the extracts certain products secreted by the glands.

It is a striking fact that most of the attempts made in the line just mentioned in reference to the pituitary have yielded substances possessed, not of the blood-pressure-raising action of whole extracts of the organ, but of a strong hypotensor action. It would appear that in the course of some chemical manipulations the pressure-raising substances in part disappear, while the pressure-lowering substances persist more or less completely and secure a preponderant rôle in the action of the drug. Howell had already noticed that, upon macerating pituitary extract in alcohol, the latter dissolved out the hypotensor substances, while the pressure-raising substances remained behind in the albuminous clot. Houssay, of Buenos Ayres, claims to have isolated the active principle of the pituitary in the following manner: After prolonged and repeated boiling of the extracts of hypophysis he treats the filtrate in succession with lead acetate, sulphuric acid, and hydrogen sulphide; the resulting white, crystalline body is the active principle referred to. H. Claude and A. Baudoin have described a procedure for isolating secretory products of the hypophysis. Posterior pituitary lobes, dried in vacuo, are extracted with chloroform, and the greater part of the proteins then coagulated with dilute alcohol.

The substances isolated, respectively, by Houssay and by Claude and Baudoin appear to have a similar cardiovascular action, causing a lowering of the blood-pressure with diminished amplitude of the heart beats. The pressure-lowering action is more or less prolonged, according to circumstances. It is more pronounced in man than in certain of the lower animals; thus, in the rabbit, after intravenous injection of the extract of hypophysis deprived of its lipid content by chloroform and then purified, there is

shown a short stage of lowered pressure followed by a reactive period in which the mean arterial pressure rises slightly and the cardiac amplitude is enhanced. In man injection of these same glandular products leads to a very pronounced stage of lowered pressure followed by a reactive stage at times of trifling extent or even entirely absent. Thus, in one of the author's cases the systolic pressure, upon intravenous injection of the products referred to, dropped in five minutes from 210 mm. Hg [Pachon instrument probably] to 120 mm., rising again in five minutes more to 180 mm., while in another case, in which the products were given intramuscularly, similar, though somewhat less pronounced and much more protracted, effects were noted.

The distinctly hypotensor substances obtained from the pituitary in the attempt to isolate the active principles possess a few of the known actions of whole extracts of the organ. Thus, the action of stimulating intestinal motor activity appears to be preserved, judging from the frequency of bowel movements in the hour succeeding the injection. The action on the uterus and adnexa also appeared rather distinct clinically. The delipoidized and purified extract also produces glycosuria. On the other hand, the vasoconstrictor effect of this extract appears less marked; the pallor exhibited by patients immediately after injections of pituitary extract may be due simply to lowered pressure and the selective action of the product on the left ventricle. Similarly, the diuretic action emphasized by Schäfer seemed less pronounced than after the administration of whole pituitary extracts. It is still difficult to state whether the same hypotensor substances are possessed of all the properties above referred to, or whether they are present in admixture with still other active substances.

On the whole, it seems clear that different pituitary preparations should be used with discrimination, according to indications. The substances studied by Houssay and by Claude, Baudoin, and Porak exhibit differences, in their effects on blood-pressure, from whole extracts of the posterior lobe of the hypophysis, while preserving most of the other properties of pituitary products. These differences are of import where certain definite therapeutic effects are sought or where the results of a rise in blood-pressure, as in hemoptysis among the tuberculous and in visceral hemorrhages (which have appeared favorably influenced by pituitary injections), are regarded with apprehension.

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## Abstracts from Current Literature on the Internal Secretions

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**Effect of Removal of the Adrenals on the Stomach.**—The author describes a series of experiments on rabbits and dogs and also 5 autopsies on human subjects. In the animals after complete or partial abolition of adrenal functioning there were marked changes in the mucous mem-

brane of the stomach consisting in circulatory disturbances, edema, hemorrhage, and necrotic processes, the severest of which only exceptionally showed even slight tendency to heal. The author's reasons for assuming that the stomach lesions were caused by the adrenal disturbances were that they were less severe and recovered more readily when only one adrenal was removed; that they were not found in a rabbit which in spite of removal of the adrenals showed no signs of decreased adrenal function; that they were not found when the operation consisted simply in removing the adrenal capsule, and that they were lacking when the rabbits, after removal of the adrenals, were given epinephrin or adrenals were transplanted from other rabbits. In 5 cases of gastric or duodenal ulcer in human beings microscopic examination showed marked changes in the adrenals,—thickening of the capsule, nodular hypertrophy, fatty degeneration, great congestion, and multiple hemorrhages. (*Journal of the American Medical Association*, from Virchow's *Archiv*, Bd. ccxiv, Nu. 3, 1913.)

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**Uric Acid Excretion in Hypophyseal Disease.**—The authors' patients were placed on a purin-free diet, and the uric acid of the urine determined by the method of Hopkins-Folin-Shaffer. In 3 cases of acromegaly the endogenous uric acid was found to be twice the normal average or greater. In 1 patient an endonasal resection of part of the hypophysis was effected; no clinical improvement was noted shortly after the operation, nor was there any decrease of the uric acid output. In this patient there was a prompt increase in uric acid following the administration of 20 Gm. of sodium nucleinate. In 2 cases of dystrophia adiposogenitalis associated with hypophyseal tumor (one hypophysis cystic at autopsy, the other a "tumor in the hypophysis region"), it was found, on the other hand, that the endogenous uric acid was normal or subnormal, with only a slight response to the administration of sodium nucleinate. Assuming that acromegalics are suffering from increased functional activity of the hypophysis, it is suggested that the determination of endogenous uric acid may be of some diagnostic value. W. Falta and J. Nowaczynski (*Berliner klinische Wochenschrift*, vol. xl, p. 1781, 1912; *American Journal of the Medical Sciences*, July, 1913).

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**Adrenal Hypernephroma and Sex Characters.**—Abnormal sex characters do not always occur when there is adrenal hypernephroma. Our present knowledge concerning their relationship to those tumors may be summarized as follows: 1. In children they are almost invariably present in the form of hirsuties and often other abnormalities (17 cases of hypernephroma collected; in 16—13 females and 3 males—sex abnormalities were present). 2. In adult females before the menopause they are frequently present (12 cases collected; sex abnormalities present in 7, while in 2 others menstrual disturbances occurred before death). 3. In females after the menopause they are not recorded, though a growth



of hair on the face or change in the voice, etc., might be thought worthy of note (8 cases collected). 4. In adult males they are probably absent. In this connection it is of great interest that adrenal cortical rests or bilateral hyperplasia of the adrenal cortex was noted in 15 per cent. of female pseudohermaphrodites, but in only 0.7 per cent. of male pseudohermaphrodites.

There is no evidence that hypernephroma in the kidney, which shows a totally different histologic structure from that in the adrenal, is ever associated with abnormal sex characters. Glynn and Hewetson (*Journal of Pathology and Bacteriology*, July, 1913).

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#### **Cerebral Form of Subacute Hypoadrenia Following Typhoid Fever.**

—The writer records the case of a soldier of 22 who was in the hospital for two months with typhoid and returned two months after discharge. He was then profoundly asthenic, pale, and wasted, answered questions reluctantly, and complained of lumboabdominal pains. There was persistent severe cephalalgia, with intellectual clouding, refusal of food, nocturnal delirium, inequality of the pupils, great tearfulness, hopelessness, mental inertia and indifference, sciatic pains, digestive troubles, and vomiting. The extremities were cold to the touch and slightly bluish. The patient complained that he could not warm himself in bed. Hypothermia and a very feeble low-tension pulse were present, but not the white-line phenomenon. He improved progressively under adrenal medication. At first he was given 30 drops daily of 1:1000 adrenalin solution, increased to 40 drops after a few days' time, with periodic cessation of this treatment. He recovered in about three months, and returned to military service. The commonest forms of adrenal encephalopathy appear to be the psychopathic and the depressed melancholic. R. Donius (*Archives de médecine et de pharmacie militaires*, June, 1913; *Medical Chronicle*, August, 1913).

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**Action of Extracts of the Medulla and Cortex of the Adrenals on the Mammalian Heart.**—The active substance contained in the adrenal medulla strengthens, in small doses, the contractions of the heart. In larger amounts it accelerates the heart rate and increases the tone of the myocardium. The slowing in the heart rate noted upon administration of the extract in the living animal is due to a simultaneous stimulation of the cardioinhibitory mechanism, the result, in turn, of the vasoconstriction caused by the adrenal preparation. The acceleration caused by epinephrin in the *isolated* mammalian heart is due chiefly to a direct excitation of the myocardium and to a state of paralysis or lessened excitability of the cardioinhibitory apparatus. The change in the strength of the heart beats and in the tonicity of the heart muscle is also due to a direct action of the adrenal principle on the cardiac fibers.

In the extract from the cortic portion of the adrenals there exists, besides the substance considered active, another principle, having an

opposite effect, *i.e.*, tending to slow and weaken the heart beats. A. Austoni (*Archives italiennes de biologie*, vol. lvi; *Nouveaux remèdes*, April 24, 1914).

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**Thyroid Therapy.**—A disadvantage in the use of ordinary thyroid preparations in hypothyrotic conditions is that the sheep thyroids employed contain much less arsenic than human thyroid. A useful effect is obtained by combining with the sheep thyroids arsenic, especially in the form of sodium cacodylate. The further addition of epinephrin is appropriate in order to secure a stimulant action on the heart. Thus, the author advises the following mode of medication: Dried thyroid substance, 0.05 Gm. ( $\frac{1}{2}$  grain); epinephrin, 0.001 Gm. ( $\frac{1}{65}$  grain), and sodium cacodylate, 0.0005 Gm. ( $\frac{1}{130}$  grain). Continued treatment with this combination frequently brings about decided improvement in cases with an intermediate grade of hypothyroidism, as manifested by such signs as a rough, dry skin, poor nutritive state of the hair and nails, bleeding from the gums, headache, lassitude, lowered temperature, and loss of hair. *Pyorrhea alveolaris* is to be considered associated with poor thyroid functioning. Ten out of 14 cases of this affection were favorably influenced by thyroidin-sodium cacodylate treatment. Heinrich Stern (*Berliner klinische Wochenschrift*; *Zentralblatt für experimentellen Medizin*, July 10, 1913).

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**Abderhalden's Hematologic Studies and the Internal Secretions.**—The author discusses the relationship between Abderhalden's diagnostic reactions for pregnancy and tumors, on the one hand, and the pathology of the internal secretions, on the other. Naturally the alien albumin from the placenta and tumors may have something in common with the disordered secretions of ductless glands. These substances may not, like those first mentioned, be split up by enzymes in the blood. Rather, they themselves represent cleavage products of a more or less alien and toxic character. Fauser has recently sought to show that such products are able to produce psychoses, notably thyropsychoses, *dementia precox*, and *luetie psychoses*. In *dementia precox* cleavage products from the genital glands are accused. In *metaluetic psychosis* some unknown component of this sort may be discovered in time. The parathyroid is suspected in connection with convulsive affections as well as the myasthenic states. It is time that these patients were treated with pluriglandular extracts. Münzer (*Berliner klinische Wochenschrift*, April 28, 1913).

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**Medical Aspects of Exophthalmic Goiter.**—The author has treated medically over 90 cases, about 40 being still under treatment. Most of these he expects to progress gradually to recovery, as the others have done. Operative assistance will probably be required in less than 10 per cent. of the whole number treated. He employs the following remedies: Quinine neutral hydrobromide (preferred to other quinine salts because it is better tolerated); the salicylates, aspirin, and drugs

of this class (also neutralizing thyroid secretion); bromides or cannabis indica, to control excessive nervousness and the physiologic action of quinine, and trional, veronal, etc., in some instances, for insomnia. Purgatives are useful in removing indican. The author recommends a combination of podophyllin, cascara sagrada, and oil of black pepper; also sodium sulphate, given with potassium bitartrate. Proteins are added to or taken from the diet, as may be indicated both by the urine and the patient's weight. The Bulgarian lactic acid bacteria are always of great value. H. P. Jones (New Orleans Medical and Surgical Journal, November, 1913).

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**Uterine Rupture from Pituglandol.**—The patient, 34 years old, had had 7 spontaneous, full-term deliveries. Pains began at 11 P.M.; membranes ruptured at 1 A.M.; later, the heart sounds became inaudible and the discharge of meconium caused the midwife to send for a physician. As none could be procured, the patient was sent to a hospital. At 5.30 A.M. one dose of pituglandol, 1.1 c.c., was given subcutaneously to increase the pains. The cervix was widely dilated. Since after one and a half hours this had not increased the pains, another dose was given; five minutes later the patient became restless and excited, as now very severe, quick pains ensued. The patient cried out suddenly; the pulse became feeble, and cold perspiration appeared on the forehead. Rupture of the uterus was diagnosticated and laparotomy resorted to at once. The cervix was torn through on both sides, up into the parametrium. The uterus was removed. The child could not be resuscitated, and the mother died of general peritonitis on the third day. G. Espent (Münchener medizinische Wochenschrift, August 12, 1913).

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**Asthenia from Functional Insufficiency of the Adrenals.**—Case of a woman of 32 who had never been quite healthy since a severe diphtheria at 14. She tired easily and experienced palpitations, dizziness, and sudden sweating on slight exertion. At 28 she passed through a normal pregnancy. Called to see her as she was said to have fainted, the author found the skin pale and clammy, the pulse scarcely perceptible; the heart rate 52, but rhythmic; the heart sounds pure, and the temperature in the mouth 35.8° C. The patient felt that she was dying. The author injected 0.5 c.c. of 1:1000 epinephrin solution, assuming that the trouble was an acute vascular paralysis. In fifteen minutes the symptoms had subsided, and the patient felt well and strong; pulse 62, and much stronger. The patient was given a course of carbonated baths and seems permanently improved; the myasthenia is much better, the pulse 72, and the blood-pressure 110. Hoke (Wiener klinische Wochenschrift, October 2, 1913).

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**Epinephrin and Abortion.**—Recent reports in the literature of benefit from epinephrin in osteomalacia, in uncontrollable vomiting, and in

other disturbances in pregnant women led the author to give the drug in such cases, as all the writers emphasized the harmlessness of this treatment in the dosage advised. Two recent experiences, however, tend to contradict this assumption of harmlessness: Two women in the second month of pregnancy were given a mild course of epinephrin and calcium salts because of an incipient apical process and defective nutrition. Each aborted in less than a month. The author has given this treatment to other women in later months of pregnancy and never before witnessed any tendency to abortion. One of the present patients had taken it without disturbance during the last three months of a preceding pregnancy. Silvestri (*Gazzetta degli Ospedali e delle Cliniche*, October 28, 1913).

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**Observations on Goiter in Fish.**—Prevalence of goiter in fish had been brought to the author's attention by the officials of a hatchery. The fish, in this case brook trout, had become listless and lost their fighting qualities. It was found that the fish had been kept exclusively on a beef-liver diet, and the large majority of them showed marked goiter development. The diet, except for the younger fish, up to 9 months, was accordingly changed to butterfish. In the younger fish this seemed to a large extent to remove the tendency to goiter development, and in the case of the older fish the goiter already developed showed actual retrogression. The normal food of the brook trout consists of fish, protozoa, and metazoa. Sea fish was chosen as the food because it was a convenient means by which to give a small amount of iodine. The problem presented is a great one in fish culture and the means employed in this case will absolutely relieve it. David Marine (*Experimental Medicine Section, Academy of Medicine of Cleveland; Cleveland Medical Journal*, December, 1913).

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**Thyroid Treatment in Periodic Hydrarthrosis.**—Report of the case of a young laborer who had been suffering for some time from mild rheumatoid phenomena in the knee-joints and right elbow-joint. Later, attacks of marked, almost painless swelling of the knees, unaccompanied by fever, were experienced, coming on at intervals of four to six days. The patient was neurasthenic and impotent. The thyroid was found to be small. Treatment with potassium iodide, methyl salicylate, tincture of iodine, etc., had been given without effect. Administration of cachets of powdered thyroid substance, each containing 0.025 Gm. ( $\frac{2}{5}$  grain), twice daily, was followed promptly by irregularity in the attacks of joint swelling, and then by marked diminution in the swelling at each attack and lengthening of the intervals between attacks. The improved state continued after the thyroid medication (taken on twenty-four successive days) was stopped. Paul Dalché (*Bulletins et Mémoires de la Société médicale des Hôpitaux de Paris*, November 6, 1913).

**Rôle of the Corpus Luteum in the Induction of Mammary Secretion.**—Experiments are reported as a result of which the authors conclude that, under normal conditions, the corpus luteum not only is the determining factor in the enlargement of the breasts during pregnancy, but, in addition, sensitizes the mammary cells to the action of another factor, which causes them to manifest their secretory function. This other factor must be in the nature of an internal secretion. Under certain experimental conditions, a uterine or parauterine mechanical stimulus is capable of exerting the same action as the specific hormone. The mammary gland only reacts, however, to this traumatic stimulation if it has been subjected to a sufficient degree of sensitization from the corpus luteum. P. Bouin and P. Ancel (*Société de Biologie, Paris*, February 14, 1914; *Semaine médicale*, February 25, 1914).

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**Peripheral Action of Epinephrin, with Especial Reference to the Lungs.**—The author was able to show conclusively that epinephrin produces a prompt dilatation of the bronchioles where these are contracted; this effect is wholly independent of the rise of blood-pressure. Injection of a small dose of pilocarpine into the spine of a dog with vasosympathetic nerves cut, produces a slight bronchoconstriction, which is soon followed by a moderate but usually prolonged dilatation; this latter change does not occur if the adrenals have been previously excised or clamped off, and may therefore be ascribed to stimulation of these glands or to an increased secretion of epinephrin. Nicotine causes, after brief initial constriction, a dilatation, which appears to be due to an increased secretion of epinephrin caused by the nicotine. D. E. Jackson (*Journal of Pharmacology and Experimental Therapeutics*, March, 1913).

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**Intestinal Disturbances in Exophthalmic Goiter.**—The author points out that diarrhea in exophthalmic goiter, which is frequently rebellious to ordinary measures, yields to the use of large oil enemas. Such diarrhea thus appears to be due to stasis of fecal matter in the intestine. In an exophthalmic goiter patient aged 42, with associated coprostasis, marked improvement followed regulation of the bowels. The exophthalmos and palpitation diminished and the pulse rate, previously 120, dropped to from 92 to 112. Soon all the symptoms of the disease disappeared, the thyroid merely remaining slightly larger than normal. Some years later the patient was seen again, in good health. In three other cases Basedow symptoms similarly disappeared through treatment of intestinal stasis. Ebstein (*Quinzaine thérapeutique*, November 10, 1913).

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**X-ray Treatment in Exophthalmic Goiter.**—The writer reports treating 16 cases of exophthalmic goiter with the X-rays. All left improved, some apparently cured. He suggests that exophthalmic goiter, the symptoms of which are apparently due to excess of thyroid secretion, is itself due to sympathetic irritation, and that Addison's disease is



also due to this cause, pointing out certain features which, he thinks, are common to both these diseases—pigmentation, irritable heart, digestive disturbances, etc. Cases of diagnosed Addison's disease which recover are due to the improvement in the sympathetic system. Early treatment of all cases showing symptoms of exophthalmic goiter with the X-rays is recommended. P. C. Fenwick (*Australasian Medical Journal*, December 20, 1913).

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**Search for Adrenal Antibodies in the Presence of Adrenal Insufficiency.**—The authors sought, by the complement deviation method, to find out whether adrenal antibodies exist in the blood of subjects with adrenal insufficiency. The reaction, performed with an extract of ox adrenals as antigen, proved negative in the serum of 7 patients, and likewise in that of a rabbit in which serious lesions of the adrenals had been artificially produced a month previously. Thus the reaction of fixation cannot be used for the diagnosis of adrenal insufficiency. The authors recall the fact, shown in a previous report, that the complement deviation reaction, performed with adrenal antigen, is positive in syphilitics in whom the Wassermann reaction, performed with the customary antigen, is positive. Sézary and Borel (*Tribune médicale*, March, 1914).

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**Operations on Cases of Hyperthyroidism Associated with Other Surgical Conditions.**—In the last year the author operated on 2 cases, both of whom died. The first had a fibroid with mild hyperthyroidism. The other, an enormous fibroid with questionable colloid goiter. The first case died at the end of twenty-four hours with marked hyperthyroidism. The second died on the fourth day with the same symptoms. If hyperthyroidism is present and there is also an abdominal condition requiring surgery, a ligation of both superior thyroid arteries should be done at a preliminary operation, to cut down the blood supply to the gland and thus curtail in some degree its secretion and the toxemia which sometimes overwhelms those cases. E. C. Moore (*California State Journal of Medicine*, November, 1913).

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**Tracheal Obstruction Due to the Thymus.**—In the author's case the dyspnea caused by the enlarged thymus was relieved by intubation, but returned shortly after the removal of the tube. The patient, aged 3½ years, of a type associated with status lymphaticus, received 2 injections of antitoxic serums without any anaphylaxis or fatal result, and had only a slight erythema following the administration of the first dose. While asthmatic since birth, the child had never had convulsions. There was an area of dullness over the upper end of the sternum and the upper limit of the first intercostal space, extending downward to about the fourth intercostal space; the lateral diameter extended 3 cm. to the right of the median line and 2 cm. to the left. Lynah (*Archives of Pediatrics*, September, 1913).

**Pituitary Extract in Delayed Labor.**—Pituitrin employed to induce labor in women past the calculated time for delivery. In one case, after 2 injections of pituglandol, twelve days after the awaited time for delivery, the author succeeded in inducing labor pains which resulted in the birth of a large child five hours after the first injection. In another case 4 injections were necessary to terminate labor, six hours elapsing from the first injection. The first injection of 1 c.c. is usually without effect, but the second dose excites active labor pains. This procedure is to be recommended for women who are prone to carry their pregnancy beyond the normal limit, giving birth to large children, with correspondingly difficult labor. Lucius Stolper (*Zentralblatt für Gynäkologie*, February 1, 1913).

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**Combined Bromide and Thyroid Treatment of Epilepsy.**—The tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet  $1\frac{1}{2}$  grains (0.1 Gm.) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 15 grains (1 Gm.), of potassium bromide are given daily at equal intervals from meals, say at 10 A.M. and 10 P.M., dissolved in half a wineglassful or less of water. The bromide is to be given regularly. A chlorine-free diet is enjoined, and, should acne appear, the pustules are to be treated with an application of chlorinated soda solution and sulphur ointment. Sicard (*Journal de médecine de Paris*; *Charlotte Medical Journal*, December, 1913).

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**Reversible Action of Epinephrin and Kindred Drugs on the Bronchioles.**—Using new plethysmographic methods for investigating changes in the bronchiolar airway under the influence of drugs, the author observed that the action of epinephrin, tyramine, epinine, and some other amines and alkaloids, on normal bronchioles, is constriction. This constriction is not parallel to, and usually outlasts, the accompanying vascular constriction. It is abolished by urethane. After preliminary bronchiolar constriction has been brought about by curare, ergotoxin, apocodeine, pilocarpine, muscarine, or physostigmine, the action of epinephrin, tyramine, etc., is reversed, bronchiolar dilatation taking place. F. L. Golla and W. L. Symes (*Journal of Pharmacology and Experimental Therapeutics*, September, 1913).

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**Iodine Content of the Thyroid.**—The author found iodine in the thyroids of the pigeon, alligator, and frog, in amounts corresponding with the diets of these animals. It is also present in the thyroids of the dogfish. Thus, further support is given to the theory that iodine is an invariable constituent of thyroid tissue. The amount of iodine present in the parathyroids of the dog is of a less order of magnitude than that in the corresponding thyroids, if, indeed, the actual quantity ob-

served be not wholly attributable to thyroid contamination. Such results indicate a differentiation of function between the thyroid and parathyroids. Cameron (*Journal of Biological Chemistry*, January, 1914).

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**Internal Secretions and Muscular Activity.**—The author determined the effect on the muscles of extracts of different ductless glands, using for his experiments on dogs a glycerin extract of the thyroid, parathyroid, adrenals, thymus, pancreas, pituitary body, and testicles, besides several commercial products. The results showed that in general the glands may be divided into two groups: Those which stimulate muscular activity—the thyroid, testicles, pituitary body, and adrenals—and those which depress muscular action—the parathyroids, pancreas, and thymus. Just what determines the action is uncertain. G. I. Markeloff (*Roussky Vrach*, September 14, 1913).

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**The Hypophysis During Gestation.**—During gestation the glandular portion of the hypophysis undergoes histologic changes, the most marked being an enlargement of the cellular columns, hypertrophy of the cells and nuclei, and diminution of the chromophilic cells with increase of the other cells. Colloidal substances were not found, possibly because the glands examined had been removed from young and healthy animals. The author believes colloidal substance is not found if the proper technique has been followed. The changes described seem to take place early in pregnancy and are apparently not progressive. Siguret (*Thèse de Paris*, 1912; *Tribune médicale*, September, 1913).

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**Pituitary Extracts and the Stomach.**—The author used an extract of the posterior lobe of the pituitary of the bullock prepared by boiling 1 part of the gland in 5 parts of water, precipitating the albumin with lead acetate, treating the excess of lead with sulphuric acid, and neutralizing. One c.c. in salt solution, injected subcutaneously, promoted the contractility and secretion of the stomach, while the tone and the rhythm were regulated. The results were both experimental and clinical. On the excised stomach a similar effect was produced. Houssay (*Semana Medica*, November 13, 1913; *New York Medical Journal*, January 3, 1914).

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**Epinephrin Anaphylaxis.**—The authors observed ten and twenty days after an injection of suprarenin the characteristic phenomena of anaphylaxis, followed by death, in dogs in which 1 mg. of suprarenin or a small, normally inactive dose of thionin was injected. The typical circulatory manifestations—rise in blood-pressure, followed by a fall—were mechanically recorded. I. Gautrelet and P. Briault (*Société de Biologie*, Paris, July 12, 1913; *Nouveaux remèdes*, March 24, 1914).

# Department on General Medicine

## Cyclopedia of Current General Literature

**Arthritis Deformans, Etiology of.**—The chief objection to the infection theory has been the lack of isolation of organisms from the tissues of joints in so many cases. It occurred to the author that it would be well to look for organisms in the lymph-glands draining the involved joints, and he reports the results he has obtained. Germs were isolated from glands in 35 out of 38 cases of the disease, its duration ranging from two to seventeen years. Streptococci were obtained in 14 cases; a peculiar streptococcus-like organism at first completely or partially anaërobic in 9 cases; *Bacillus Welchii* in 9 cases; staphylococci in 3; *B. mucosus* in 1 case, and the gonococcus in 1. In a number of glands several organisms were found at the same time. In no instance were the streptococci hemolytic for human blood. They resembled on isolation the usual *Streptococcus viridans* more than hemolytic streptococci. There is often a marked difference between the type of organisms found in foci of infection, such as the tonsils, and of those found in the glands (or joints). Positive results were obtained from glands measuring only 5 mm. The number of colonies ranged from 1 to 2000. The virulence was slight. When first isolated, the streptococci showed marked affinity for joints and muscles, sometimes causing lesions closely paralleling the condition in the patient from whom the strain was iso-

lated. Sometimes the same organism was isolated from widely separated glands, from gland and muscle, or joint fluid or joint capsule. The size of the gland is apparently often proportional to the degree of joint disease. The patient is often sensitive to injection of autogenous vaccine in the glands, and marked improvement may follow such injection. These facts seem to leave little doubt as to the infectious cause of the disease, but the full significance of the *B. Welchii* in both glands and joints is not yet clear. E. C. Rosenow (Journal of the American Medical Association, April 11, 1914).

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**Carcinoma of the Breast, Diagnosis of.**—Two clinical diagnostic points in breast carcinoma to which, according to the author, not enough attention is given, and which he has not seen mentioned in American literature, are (a) changes in the areola and (b) elevation of the nipple. Very early in nearly all these cases the areola shows slight changes in contour, the border presenting slight irregularities. With the advancement of the process the irregularities become more marked and the size of the areola may diminish, even to the degree of almost total disappearance. The nipple in a large percentage of cases is drawn to a higher plane than the normal one, the degree, of course, depending upon the amount of contracture. This is seen at its maxi-

num in the scirrhus variety, and is more constant than many other signs of carcinoma.

Some authors mention "atrophy of the breast" in connection with breast carcinoma; "retraction of the breast" has also been mentioned. Both of these conditions occur and in reality bring about elevation of the nipple. But as a diagnostic sign neither of the former is so plainly perceptible as the actual elevation of the nipple. In the earliest stages of contracture it is difficult to make out atrophy or retractions; yet it is easy to recognize elevation of the nipple when compared with its fellow.

So-called "pig skin" is another evidence of the same phenomenon and might be classed as the minute, and elevation of the nipple as the gross, manifestation of contractures. In breast carcinoma contracture in any stage is probably the most important sign available. It is seen in most late cases and in many early ones. If none is present one may well question the diagnosis of carcinoma, although not definitely exclude it. H. J. Van den Berg (*Journal of the Michigan State Medical Society*, June, 1914).

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**Chancroid, Fuchsin in.**—Fuchsin in a 5 per cent. ointment with petrolatum has been found of benefit in the treatment of carbuncles, and this led the author to try it in soft chancres. Nine cases of undoubted soft chancre showed so much benefit that he is convinced there is no other drug which is so useful. Under ordinary treatment soft sores take about six weeks to heal up, while with fuchsin he has been able to heal them in less than two weeks. The average duration of treatment was eight days.

One case was complicated with a bubo in the left groin as large as a small orange. With fuchsin ointment the chancroid healed in six days, and the bubo, which had threatened to suppurate, at once subsided. The ointment of fuchsin (aniline red) is applied to the chancre, after first washing and then drying it. If the prepuce can be brought over the glans penis no other dressing is required, although it is to be noted that fuchsin stains the linen red. The author requires the patient to clean the parts and apply the ointment twice a day, simply because it is difficult to get poor people to learn the benefits of keeping them clean. Otherwise, in his opinion, a single application in twenty-four hours quite suffices. Preliminary application of caustics, such as nitric acid, to destroy the superficial bacteria and infected tissues is not at all necessary. The ointment, even when applied to the most foul ulcers, clears up everything, and within forty-eight hours granulations always spring up. The effect of fuchsin seems to correspond in some respects to that of scarlet red—viz., rapid epidermization; but besides this there is an antiseptic effect. Fuchsin ointment of greater strength than 5 per cent. may irritate the parts. It is of no benefit in hard chancres. C. H. Kantawala (*Lancet*, May 23, 1914).

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**Eczema, Treatment of.**—As a rule, two paramount indications are to be met, viz., a rigid non-stimulating diet, and rest. For the average individual, who has usually been eating too much, an exclusive diet of milk, boiled rice, and Vichy water for the first week should be ordered, with



several doses of a saline such as Carlsbad salts. At the end of a week cooked fruits and soft vegetables may be added, and in another week chicken, eggs, or fish in moderation. Most patients experience a definite sense of general betterment aside from the relief of their eczemas.

The indication for rest is double. If the eczema is at all active and acute, anything which causes a dilatation of the superficial capillaries is detrimental. If there is any degree of nerve exhaustion, the more nearly the rest is complete, the better the result.

Locally, for the frankly acute, moist eczemas the author finds nothing comparable to treatment with wet dressings. Damage attributed to water in eczema is due not to the water *per se*, but to the sudden change from wet to dry and *vice versa*. If wet dressings are elected, they must be kept continuously wet until the indication is to change. Thus, in a typical case of moist infantile eczema involving chiefly the head and face, a compress of boric acid solution, or 1 per cent. resorcinol solution, or even normal salt solution will effect a transformation in from twenty-four to forty-eight hours. Two masks are made of several thicknesses of fine linen, one being carefully washed while the other is in use. With the compresses renewed every three hours, rapid improvement is noted. Within forty-eight hours the crusts have separated, the oozing surface has become dry, shining, and ready for epidermization. In fact, if the resorcinol solution has been used the process is already well under way. At this stage the compresses may be discontinued and a soothing ointment

of boric acid and ichthyol (3 per cent. of each) substituted. In other cases less acute, and for infants in whom such exacting ministrations are not practical, frequent applications of a 3 per cent. aqueous solution of ichthyol followed by calamine lotion are excellent.

In subacute cases, either in children or adults, 2 per cent. salicylic acid in Lassar's paste is a combination which deserves its high repute. It should be the remedy of choice when one is in doubt. As the case gets further away from the acute and nearer to the chronic type, stimulating applications are in order, with keratolytic agents in appropriate strength. For such cases a combination of salicylic acid and a tar preparation, as oil of cade or oleum rusci, is indicated. If the condition is only slightly indolent, salicylic acid, 3 per cent., and tar, 5 per cent.; if more sluggish, salicylic acid, 5 per cent., and tar, 10 per cent., may be tried. In the very indolent cases sulphur, green soap, pyrogallol, and white precipitate are often of service.

In treating any eczematous surface a good rule is first to remove all crusts and debris. Preliminary applications of olive oil, or a starch poultice, will serve this purpose. E. D. Chipman (California State Journal of Medicine, May, 1914).

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#### Epiglottiditis, Acute Phlegmonous.

—This is an infectious process involving the submucous structure of the epiglottis and contiguous tissues. In the 4 cases under the author's observation suppuration accompanied the condition. The disease is characterized by a sudden, sharp onset, with painful deglutition and a sense of

fullness or obstruction in this region. Dysphagia appears, and the voice is guttural. These symptoms may assume a serious aspect in a few hours. At times the attack is ushered in with a chill, followed by a rise of temperature. The epiglottis is found dusky red, three or four times its natural size, and obstructing the laryngeal orifice. In all the patients the edema extended to the aryepiglottic folds, in two instances causing difficulty in breathing. Theisen has recorded 4 fatal cases, and Semon 4 deaths in a series of 14.

The alarming symptoms appear suddenly, but may subside in a few hours under active treatment. When local measures fail to bring about the desired results the question of tracheotomy arises. Moure states that it is the method of choice, but 7 of Semon's patients operated upon by tracheotomy did not recover.

The author's 4 cases were primary manifestations, but this disease may appear secondary to infective conditions of the teeth, tonsils, pharynx, or tongue.

The ichthyol-glycerin treatment (half-hourly applications of a cold 25 per cent. ichthyol-glycerin mixture) proved very beneficial after the surgical intervention (incision) in the author's hands. Stock or autogenous vaccines should be considered in the treatment of these cases. Ice externally was used in the author's cases. M. D. Lederman (*Laryngoscope*, January, 1914).

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**Hemolysis from Distilled Water Injection.**—Report of experiments on dogs. Results: Rapid intravenous injection of distilled water, in amounts equal to from 2 to 3 per cent. of the

body weight or more, will cause in the dog transient hemoglobinuria and albuminuria. Lengthening the duration of injection from five to forty-five minutes is without noticeable effect, though a much slower injection might give different results. Hemoglobin-stained urine usually appears in the bladder catheter in from twenty-five to thirty minutes after the beginning of the injection. The hemoglobinuria lasts from four to sixteen hours, depending on the severity of hemolysis. Much smaller amounts (as little as from 0.4 to 0.6 per cent.) are sufficient to cause a noticeable hemoglobinemia without hemoglobinuria. Hemoglobinemia appears within from two to four minutes after the beginning of the injection and may last twenty-four hours. In doses that just fail to cause hemoglobinuria, albumin and bile may appear in the urine the next day. No noticeable anemia is caused, but there is a temporary decrease in the minimal resistance of the red blood-cells. E. B. Krumbhaar (*Journal of the American Medical Association*, March 28, 1914).

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**High Blood-pressure, Treatment of.**—For patients with a pressure of 200 mm. Hg and upward who have been overworked mentally and physically, treatment should be commenced with a period of absolute rest. If there be a pulse of over 100 per minute, or signs of heart-failure, rest is imperative, and the recumbent position should be maintained until the pulse frequency has fallen to normal and the signs of cardiac weakness have disappeared. But many of the cases of high pressure occur in people who take too little exercise. Walking is one of the best forms of

exercise to be ordered. Cycling may be allowed if taken quietly. Golf may be allowed to nearly all patients, except those with advanced arteriosclerosis. The methods of Schott and Oertel, if used, should be carried out under the direction of physicians who have had special experience in this line. Massage the author has found extremely useful in patients unable to take sufficient exercise, but directions should be given that deep abdominal massage is not desirable, the massage being almost entirely confined to the chest and extremities.

Warm baths, followed by vigorous friction of the skin, are very beneficial. If the patient has been accustomed to Turkish baths, he may continue their use with advantage, but one should hesitate to allow a patient with high pressure to take his first Turkish bath.

In case of insomnia the wet pack at 70° F. often has a very soothing effect. It answered better than anything else in a patient the author saw, who had a pressure of 250 mm.

The electric light bath is very useful in many cases, stimulating the cutaneous vessels and causing sweating; the patients usually experience a sense of well-being afterward.

From the Nauheim treatment the author has seen the greatest benefit in suitable cases, but it is a two-edged sword, and is contraindicated in advanced arteriosclerosis, chronic nephritis, and intrathoracic aneurism. It should be carried out only under the observation of a physician with special experience.

A period of starvation benefits some patients, while in some cases it is difficult to induce the patients to take sufficient nourishment. Speak-

ing generally, the most suitable diet for arteriosclerotics with high pressure is one mainly composed of vegetables, farinaceous articles, and milk, while substances rich in nitrogen, and especially butchers' meat, should be avoided. In some dyspeptic patients the author has advised  $\frac{1}{2}$  pint of soured milk to be taken three times daily, with great benefit. He limits the amount of salt taken as much as possible, and prohibits salted meat and fish.

The author favors distributing the daily amount of food over 4 meals of about equal value, viz.: breakfast, luncheon, tea, and dinner. The two best meals in the day should be breakfast and luncheon; tea should consist of some bread and butter or plain biscuits with weak tea, or, better, cocoa, or milk and water; dinner should be a light meal—a little fish and vegetables, with a milk pudding.

The condition of the gums and teeth needs careful attention, pyorrhea alveolaris being one of the causes of high tension.

Calomel and blue pill are useful not only as aperients, but also have a remarkable effect in lowering blood-pressure. A teaspoonful of Epsom or Glauber's salts may be taken in half a tumblerful of warm water before breakfast, or one of the mineral waters. A tablespoonful of pure paraffin taken at night acts pleasantly and efficiently.

Next to the aperients come the iodides. Some patients tolerate the sodium salt better than that of potassium. If neither seems to suit, iodoglidine may be tried. The author orders small doses—3 grains (0.2 Gm.)—to be taken three times daily for months or even years.

In patients with a syphilitic history the Wassermann reaction should be tried, and, if positive, mercury administered, preferably by inunction, followed by potassium iodide in full doses.

High blood-pressure is often met with at the menopause, and is frequently accompanied by obesity; in such cases small doses of thyroid extract, together with a combination of bromide and iodide of potassium, are most useful in diminishing weight, lowering tension, and relieving the patient of the flushes and fullness in the head.

If the iodides are badly borne potassium or sodium nitrite in 1- to 2-grain (0.06 to 0.12 Gm.) doses may be tried, though doses up to 5 grains (0.3 Gm.) have been warmly advocated. In solution they are unstable, so are best ordered in chocolate tablets. In a few cases the author has found much benefit from the administration of the hippurates of ammonium and lithium. Of the latter, 3 to 4 grains (0.2 to 0.25 Gm.) may be given daily. The ammonium salt is less powerful, and 6 to 7 grains (0.4 to 0.45 Gm.) may be given daily. In rheumatic subjects sodium salicylate should be ordered.

The more powerful and quickly acting vasodilators, such as amyl nitrite, nitroglycerin, and erythrol tetranitrate, the author reserves chiefly for anginal or dyspneal attacks coming on in patients with high blood-pressure. In the very acute attacks inhalation of 3 minims of nitrite of amyl will often give immediate relief, and its action may be continued by giving  $\frac{1}{100}$  grain (0.006 Gm.) of nitroglycerin. This dose may be increased up to  $\frac{1}{10}$  grain (0.006 Gm.).

A patient took 10 minims (0.6 c.c.) of the official 1 per cent. solution three times a day for some weeks. Eventually it failed to give relief. The author has found erythrol tetranitrate in doses of  $\frac{1}{4}$  grain (0.016 Gm.) most useful in patients who get anginal symptoms on starting to walk. The drug should be given a quarter of an hour previously.

Bloodletting proved of the greatest service in certain cases of high blood-pressure. Venesection is indicated where the patient is unconscious and cerebral hemorrhage is feared; likewise in convulsive cases attended with high tension.

The author emphasizes the value of the sphygmomanometer in cases of coma as an indication in the employment of venesection; by this means one may be able to distinguish between coma due to hemorrhage and that caused by thrombosis, the blood-pressure being invariably low in the latter condition. F. de Havilland Hall (Clinical Journal, May 20, 1914).

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**Malaria in Infancy.**—In children in the first three months of life the first clinical manifestation of malaria is usually the finding of the child asleep with a high temperature. On waking him, he is exceedingly cross and irritable, jumping from the slightest noise, and is usually much nauseated. The temperature rises rapidly; the pulse, at first full and strong, becomes weak and thready; the skin is dry and hot; the respiration becomes rapid and shallow; the patient is constantly moving his hands and feet and rolling his head from side to side if old enough, and if the fever exceeds 103° F. there are usually convulsions, followed by coma. Unless the fever is

speedily reduced and the nervous system fortified, death results in a short time. Where the immediate danger of death is passed, the child is usually found much debilitated, and this condition lasts much longer in a young child than in an older one, the blood-producing organs not being as yet well developed.

The child's appetite is now variable; sometimes the stomach is still irritable and the child easily nauseated; the stools become frequent, watery, and offensive; emaciation is rapid, resulting, if untreated, in a speedy death.

In the diagnosis there is danger of mistaking the condition for indigestion or cholera infantum, but the attacks of indigestion usually come on while the child is asleep; usually previous symptoms have been noticed by the family, and the abdomen is usually much enlarged. In malaria the abdomen is usually normal in appearance and to the touch, while a microscopic examination of the blood will almost always reveal the plasmodium. If not, the apparent leucocytosis in a case of this kind is almost pathognomonic.

Sometimes the first manifestation of the attack is a convulsion, coming on without warning.

These patients respond much more promptly and satisfactorily to treatment, if this be instituted in time, than do older children. The treatment comprises: Cold baths to reduce the temperature, if practicable, and if not, hot ones. Small doses of heroin and atropine, or morphine (guardedly) and atropine to control the convulsions. A mixture of calomel and mercury with chalk, followed by plenty of castor oil, as hot as can

be given. Quinine, administered by mouth in some syrup or as euquinine; by inunction in the form of the soluble salts dissolved in alcohol or glycerin, or, preferably, by hypodermic injections of the quinine and urea salt. An infant of this age bears well proportionately large doses of both the mercurials and quinine. After the acute symptoms have subsided, iron in such forms as to be easily assimilated, with essence of pepsin in appropriate doses, will cause a rapid recovery from the emaciated condition. B. H. Booth (*Southern Medical Journal*, May, 1914).

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**Massage in Gynecology.**—From twenty years' experience the author concludes that massage of the pelvic organs is of great benefit if properly applied in suitable cases. Most benefit is obtained in chronic patients with old salpingitis, with congested uteri and a painful, irritable condition of the levator ani muscles and of the pelvis generally, and in chronic metritis. Great gentleness is necessary. The inner finger must not use more force than if one were wiping condensed water vapor off a window pane, and the outer hand must not rub the skin, but gently move it in a circular manner over the abdominal muscles, beginning at a distance from the pelvis, and gradually working down from above the umbilicus. Such manipulations are of great benefit in many instances. Acute inflammation contraindicates them. Delassus (*La Gynécologie*, February, 1914).

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**Middle Ear, Danger Signals in Suppuration of.**—The danger signals indicating operative interference in acute suppuration are: (1) Temperature



over 101° F. (2) Non-subsidence of pain and tenderness and temperature after the performance of paracentesis or natural rupture of the tympanic membrane. (3) Facial paralysis. (4) Vomiting, giddiness, and tenderness. (5) Early optic neuritis.

The danger signals in chronic sup-puration of the middle ear are: (1) Diminution of discharge with attacks of pain; (2) non-diminution of discharge after careful treatment; (3) fetor of discharge; (4) headache; (5) deep tenderness over the mastoid; (6) deep pain in the ear; (7) sudden increase in deafness; (8) diminution of bone-conduction; (9) vertigo and tinnitus; (10) early optic neuritis.

Occasionally in chronic suppuration one finds an early optic neuritis or slight vascular engorgement without necessarily severe intracranial disease being present. It is probably due to serous meningitis, and is an indication for immediate interference.

Such signs as high temperature, rigors, and severe vomiting, which are often given as indications for performing the mastoid operation, are not danger signals, because when they appear one has passed the signals and is actually in collision with a serious disease. When they have occurred serious measures have to be undertaken, such as opening the lateral sinus, and draining cerebral abscesses or the meninges. H. A. Kisch (*Clinical Journal*, May 20, 1914).

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**Papillomata of Bladder, Treatment of, by High-frequency Currents.**—The author applies the high-frequency treatment in the following cases: (1) In papillomata of clinically benign appearance, if they do not exceed the size of about a walnut, even if multi-

ple; (2) in all recurrences of papillomata, either after endovesical treatment or cystotomy; (3) in cases of hemorrhage of malignant growths of the bladder that cannot be arrested by the usual means. There are not rare cases of bladder growths that look like papillomata, but are cancers clinically and histologically. It is possible, however, to make the diagnosis of benignity or malignity of a papilloma in many cases, at least with great probability. In making the differential diagnosis, one must not rely on a single symptom. Often the history of the case gives some clue. Juvenile age is in favor of benignity. Very serious hemorrhages are not uncommon in benign papilloma, but the intervals between them are long, whereas in malign cases bleeding is often traceable by the microscope. Pains are very rare in benign cases if cystitis is absent and the outflow of urine is not disturbed. The general state of health is not affected, and anemia, even after heavy hemorrhage, is rapidly improved. The course of the disease is very slow. Cystitis in benign papilloma can often be cured rapidly, whereas in cancers of the bladder this is usually impossible. The capacity of the bladder in case of benign papilloma without cystitis is normal; in case of malignant growth, often diminished.

Most important and decisive is the cystoscopic examination. The surface of the benign papilloma is fimbriated, with delicate and tender processes. Smooth surface is very suspicious of malignancy, although there are benign papillomata with smooth surface. Thin pedicle is in favor of benignity; papillomata with large and broad pedicles are very often, if not usually, malignant. Disturbance of nutrition in

the mucous lining surrounding the base of the growth, infiltration of the mucous membrane, bullous edema, and venous dilatation are nearly always a certain sign of malignancy. Symptoms of generalization, of course, prove the malignancy.

Histologic examination of parts of the growth, cast off or obtained by operation, is of value only if islands of epithelial cells are found, as malignant transformation may exist at the base. Franz Gehrels (*Australasian Medical Gazette*, April 4, 1914).

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**Pellagra, Diagnosis of.**—The diagnosis of pellagra is not infrequently somewhat difficult, the chief reason being its peculiarity as regards seasonal variations, the irregularity of its symptoms, and its long-drawn-out course for the development of the characteristic signs. The skin, nervous, and gastrointestinal symptoms do not usually develop at the same time, and dependence on the skin symptoms, which are the least important, is likely to lead to mistakes. One should learn to recognize others that will help its recognition between the attacks. Of these diarrhea stands first, occurring as a spring or summer attack, and in some cases persisting through the year. It should be regarded with suspicion in pellagrous areas. It may, however, be absent, and there are other gastro-enteric symptoms that have a significance, since they commonly persist throughout the colder months and are often the first to appear. These are loss of appetite, "dyspepsia," pyrosis, and sore mouth. Nausea is present in most cases, and pain in the stomach and bowel is practically constant. Pyrosis is the most frequent, and the stomatitis occurring in the spring or

summer is commonly present at some time or other. The tongue affords much information, even in the less active stages of the disease. It may at first present only the appearance of a normally coated tongue, but very often careful observation will show enlarged papillæ on the tip or anterior portion. An enlarged tongue is not uncommon. The characteristic feature of the pellagrous tongue, however, is the shedding of the epithelium, making it look cleaner, smoother, and very red. The redness varies in degree and sometimes one sees a pale tongue. Tremor of the tongue when extended is common, and is not confined to the attack. The fissured tongue is an aid to the diagnosis and is most marked in cases of long continuance, though it is not peculiar to pellagra. One should, however, be on the lookout for it and its association with enlargement; tremulousness and partial or complete epithelium denudation are enough to justify one in suspecting pellagra. T. Frazer (*Journal of the American Medical Association*, April 11, 1914).

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**Polycythemia, Benzol in.**—Report of the case of a patient suffering from polycythemia in which the symptoms were markedly ameliorated by the administration of benzol (benzene), the improvement holding for two months after the discontinuance of the drug. Ascending dosage was employed, the author beginning with 1 Gm. (15 minims) t. i. d. of an emulsion containing 25 per cent. of benzol, 25 per cent. of olive oil, and 50 per cent. of mucilage of acacia, and increasing until finally 4 Gm. (1 dram) of emulsion t. i. d. was reached. During the improvement of the blood-

picture the red cells fell from 9 or 10 million to 5 million, and the whites from 26,000 to 9500 during the year of treatment. The other symptoms, headaches, disturbance of vision, and itching, also disappeared. In connection with the results obtained by others, this observation justifies the opinion that benzol is a valuable therapeutic agent in polycythemia. The author's patient, however, cannot be considered as cured. J. S. McLester (Journal of the American Medical Association, May 2, 1914).

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**Radium, Therapeutic Uses of.**—The author presents a report dealing with cases treated at the Radium Institute, London, in 1913. *Epitheliomata of the buccal, lingual, and pharyngeal mucous membranes* still prove both refractory and disappointing in their response to radium, but a new method of treatment has recently been devised which in instances of cancer of the tongue has given distinctly encouraging results; it consists in the burying within the carcinomatous nodule of a very small, but intensely powerful radium emanation tube possessing an initial activity equivalent to that of 80 to 100 mg. of radium bromide enveloped in a screen of 1 mm. of silver or 0.3 mm. of platinum, and giving an exposure of twenty-four hours' duration. A fairly severe reaction follows, and in some cases the nodule ceases to grow and becomes replaced by dense fibroid tissue.

Several cases of *epithelioma of the esophagus* were under treatment, and where complete occlusion had not occurred and it was possible to introduce radium actually into the lumen of the growth distinct though temporary benefit resulted.

*Carcinoma of the uterus* yielded most gratifying results—disappearance of fungating growth, arrest of hemorrhage and discharge, healing of ulceration, and relief from pain. In favorable cases the treatment appears to exert a distinctly retarding influence on the dissemination of metastatic deposits and thus to arrest the progress of the disease. It is not possible, however, to speak of a cure.

*Carcinoma of the Breast.*—In many (inoperable) patients the primary growth becomes smaller, and infected glands and subcutaneous nodules lessen or perhaps even disappear. Little or no effect appears to be exerted in the prevention of metastatic deposits. Some cases with pleurisy dependent upon carcinomatous invasion of the pleura showed remarkable improvement. Small, isolated recurrent nodules, inoperable by reason of their attachment to the sternum, clavicle, ribs, or rib cartilages, are best treated by burying a small powerful emanation tube screened with 1 mm. of silver in them for a period of twenty-four hours.

*Carcinoma of Thyroid.*—Encouraging results were obtained in the few instances under notice. The treatment employed was to use numerous powerful applicators screened with 2 mm. of lead, and so disposed over the surface of the growth as to obtain the maximal "cross-fire" irradiation.

*Carcinoma of Rectum.*—This disease displays much variation in its response to radium. In general, the soft, annular and vascular type of growth is much more favorably affected than the flat, hard, non-annular plaque with much subjacent induration. Growths situated in the upper half of the rectum appear to be the more amenable.

Colostomy before radium treatment is often advisable.

The routine method consists of a thirty-hour exposure—five days of six hours each—with a tube containing 100 mg. of radium bromide, screened with 2 mm. of lead and 3 mm. of rubber, and applied in actual contact with the growth, the series of exposure being repeated at the end of six weeks. If the patient proves extremely susceptible smaller doses are given at shorter intervals.

*Carcinoma of Prostate.*—Benefit was noted in all cases. When catheterization can be well tolerated a 50 mg. tube of radium bromide in a "window" screen of 1 mm. of silver and 1 mm. of lead is introduced per urethram and maintained in actual contact with the growth for a period of two hours a day on five successive days, and its action is supplemented by another tube of 100 mg. in a screen of 2 mm. of lead, introduced into the rectum for six hours a day on five successive days. When catheterization is not practicable or advisable the action of the rectal tube is reinforced by a flat applicator screened with 2 mm. of lead and placed either on the perineum or over the pubes.

*Carcinoma of Bladder.*—Nine cases were treated and in 6 the results were most gratifying.

*Sarcomata*, if taken in their early stages and before dissemination has occurred, do very well under radium treatment. The burying within the growth of tubes of radium salts or radium emanation should be resorted to whenever practicable.

*Fibroid Disease of the Uterus.*—Radium exerts a most beneficial action upon the menorrhagia and metrorrhagia, though it seldom produces any very

great diminution in the size of the uterus.

*Leucoplakia.*—Leucoplakic patches on the tongue, cheek, or vulva are speedily removed by radium, but tend to recur sooner or later. Half-strength plates screened with  $\frac{1}{10}$  mm. of lead should be used, and exposures varying from one to three hours' duration given.

*Flat Superficial Nevi, Capillary Nevi, "Port-wine Stains."*—If blanching be readily effected by gentle pressure, the result of radium treatment will probably be satisfactory; only by great pressure is it unlikely that radium can do much.

*Cavernous nevi* do excellently under radium, especially when of such shape that "cross-fire" radiation is possible.

*Warts and papillomata* all yield readily to exposures of twenty minutes to one hour's duration with half-strength apparatus, unscreened.

*Tuberculosis of Glands.*—Where surgical measures have been declined for cosmetic reasons radium often proves of considerable value.

*Spring Catarrh.*—Radium will often cure the most intractable cases. It is essential to proceed with great caution, giving short unscreened exposures at intervals of a fortnight and carefully noting the reaction. If the dosage be accurately adjusted the granulations on the orbital conjunctiva gradually disappear.

*Keloid* gives excellent results when treated with radium, and a great improvement, if not complete cure, can be safely predicted.

*Lupus erythematosus* often responds favorably, even after all routine methods have failed.

*Psoriasis and chronic eczema* generally yield readily to short unscreened

exposures of from two to five minutes' duration, given on 3 successive days, the series of exposures being repeated at intervals of a fortnight.

*Lichenification of the skin*, with its intolerable itching, is quickly relieved and often completely cured by one exposure of ten or fifteen minutes' duration to a half-strength applicator screened with  $\frac{1}{100}$  mm. of aluminum.

*Pruritus*.—Short unscreened exposures frequently yield a degree of relief unattainable by any other measures.

*Exophthalmic Goiter*.—The results obtained are sufficient to justify a trial of radium when other treatments have failed to produce any result. Prolonged exposures of thirty or more hours' duration in all should be given, with heavily screened apparatus containing 200 or 300 mg. of radium, the apparatus being so disposed as to cover as much as possible of the gland surface. Three or four weeks usually elapse before any effect is appreciable.

*Arthritis Deformans*.—The daily administration of 250 c.c. of radium emanation solution of a strength of not less than 1 millicurie per liter is sometimes attended by remarkable results. The cases which appear to derive most benefit are those in which the disease is of relatively short duration, and the changes are periarticular in type and multiarticular in distribution. A. E. Hayward Pinch (Lancet, May 23, 1914).

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**Scarlatina in the Newborn.**—Of 3603 cases of scarlet fever analyzed by Pospischill and Weiss there were only 28 cases during the first year, and these had their incidence during the later months of the year. The author had the opportunity of observing 9 cases of scarlet fever in infants less than 3

months of age and 1 case in an infant 9 months old. With the exception of the last all were the infants of mothers suffering from scarlet fever.

The clinical phenomena in all of these cases were somewhat as follows: From three to seven days following the onset of the disease in the mother the infant took sick with a moderate fever lasting from two to four days. There was the characteristic tongue with the reddening of the tonsils and of the soft palate. In no instance was there any membrane on or necrosis of the tonsils. There was at first some difficulty in nursing and a disinclination to take the breast. In 2 of the cases a fugitive scarlatiniform eruption was observed. In the remainder of the cases the occurrence of desquamation proved that the infant had had scarlet fever. Likewise the occasional occurrence of adenitis or otitis, and in one instance a transient albuminuria, clinched the diagnosis. The mild course of the disease and the mildness of the separate symptoms apparently justified the author in regarding these cases as instances of abortive scarlet fever. The mildness and rapid course of the disease may account for the fact that similar cases may have been largely overlooked in the past. In the breast-fed children the disease ran a much lighter course than in those that were bottle fed.

**Conclusions:** Infants during the first few months of life have no special immunity with respect to scarlet fever. Nevertheless, in the case of the newborn of mothers who have recently had an attack of scarlet fever, the disease runs a mild and abortive course. Puerperæ who have been exposed to scarlatina acquire the disease as readily as do others belonging to the same period



of life. Karl Levi (Beiträge zur Klinik der Infektionskrankheiten und zur Immunitätsforschung, Band 2, Numer 2; Medical Record, April, 1914).

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**Shoulder, Habitual or Recurrent Dislocation of.**—The author presents a new method of reaching the shoulder-joint for capsulorrhaphy. He now operates by a posterior axillary route. An incision 4 or 5 inches long is made posterior to the axillary vessels, with its center over the humeral head. The tendon of the latissimus dorsi is exposed, and above it is the subcapularis, which is not tendinous at this point. The capsule is approached through the interspace between these muscles, and the necessary suture can be readily done. Care must be taken to identify the circumflex nerve and its accompanying vessels. The advantages of this operation over the anterior one are: The wound is smaller; the large axillary vessels and nerves are not exposed, and the circumflex nerve and its vessels are more easily exposed, identified, and safeguarded; the anterior circumflex vessels are always divided in the anterior operation, never in the posterior; access to the capsule is much easier and more rapid; no muscles are divided; there is practically no hemorrhage, while in the anterior operation there was always considerable oozing; the time of operation is only about a third of that necessary for the anterior; return of normal function is much more rapidly and easily obtained; the elimination of buried material, as ligatures and sutures, and the small direct wound to the capsule in the independent position reduce the risk to a minimum. T. T. Thomas (Surgery, Gynecology, and Obstetrics, January, 1914).

**Staining Spores.**—The author has devised a stain which, he asserts, will stain spores consistently when used by unskilled workers. Four Gm. of acid fuchsin (Grubler) is dissolved in 50 c.c. of 2 per cent. watery solution of acetic acid. The two solutions are mixed and shaken and set aside for fifteen minutes; precipitation results and the mixture is filtered through a well-moistened filter paper. The reddish filtrate will keep for several weeks, but should be refiltered if precipitation occurs. In use, a rather thick smear is prepared as usual, and fixed by heat in agar culture is best. If broth is employed, a small amount of blood, or white of egg is used to fix the material to the slide. The film is covered by the dye and steamed vigorously for one minute, stain being added if needed, to prevent drying. When washed in water it appears a bright red. The slide is then dipped a few times in a dilute solution of sodium carbonate (7 or 8 drops of a saturated watery solution in a tumblerful of water), and the moment the film turns blue taken out and rinsed in water. It is then ready to be dried and used. The spores will be found to stain a deep red and the bodies of the bacteria bright blue, according to the length of exposure to the alkali. Too long an exposure will cause the spores to stain blue. The method failed with *B. mycoides*, but this was resistant to all standard methods. F. M. Huntoon (Journal of the American Medical Association, May 2, 1914).

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**Syphilis of the Nervous System, Intraspinal Injection of Salvarsanized Serum in.**—There is no doubt that syphilis of the nervous system has increased in frequency in the early stages

of the disease, at least since the advent of salvarsan. The results obtained by ordinary combined mercury-salvarsan therapy in nervous manifestations occurring in the early stages of the disease have been very gratifying, but in the later manifestations have not been encouraging. That the spirochetes in tabes and paresis have not been found, as a rule, near the blood-vessels, but generally in the gray matter at some distance from them, and that salvarsan appears to have a greater predilection for most of the other body tissues than it has for nerve-tissue (Uhlman), may explain in part the inefficiency of salvarsan given intravenously in the treatment of these conditions. Salvarsan and other chemicals administered intravenously rarely, if ever, reach the ventricular fluid, whereas such substances injected into the subarachnoid space readily reach the ventricles, and, therefore, are thrown into the space which communicated directly with the perivascular and perineural spaces.

The following technique was devised by Swift and Ellis for this purpose: A dose of salvarsan or neosalvarsan is given intravenously in the usual manner. At the end of an hour 50 to 60 c.c. of the patient's blood are drawn by venous puncture; the clear serum is separated, diluted to 40 per cent. with normal saline, heated to 56° C. for one-half hour, and then injected at body temperature into the subarachnoid space by means of lumbar puncture, after withdrawal of 20 to 30 c.c. of spinal fluid. The number of treatments to be given depends largely on the individual case, but the general rule is to give, if possible, 8 to 10 treatments, 1 every second week, then discontinue the treatments for a time, repeating them if necessary, and using as an

index 4 tests, viz., the Wassermann reaction with the blood, the Wassermann reaction with the spinal fluid, and the cell and protein estimation in the spinal fluid.

Besides the author, Swift and Ellis, Fordyce, Myerson, Cotton, and Esper have reported results from this method of treatment. About 60 cases have been treated and 500 treatments given. The author's experience consisted of 34 treatments administered to 4 patients. In each case there was pronounced improvement in the 4 serologic reactions and symptomatic improvement in 3. Swift and Ellis consider there is definite evidence that this form of treatment has a curative action on the syphilitic process, and that, therefore, its combination with intravenous treatment is indicated where especially intensive treatment is required, as in rapidly advancing tabes or paresis or where the disease has resisted other forms of treatment. W. H. Hough (*Journal of the American Medical Association*, January 17, 1914).

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**Syphilis of the Nervous System, Laboratory Diagnosis of.**—The author discusses the methods of examination in the order in which he proceeds in hospital cases. As a routine measure with a newly admitted patient, or on account of some suspicious neurologic sign, a blood Wassermann is first performed. This reaction as modified by Noguchi gives an appreciably higher percentage of positive tests in known positive cases of syphilis of the nervous system than the original reaction. Approximately 90 per cent. or over of general paretics and about the same proportion of cases of cerebral lues (meningitis, endarteritis, etc.)

gave positive blood reactions. (Some laboratories have obtained as high as 100 per cent. in a large series of cases.) The positive reaction, of course, may not mean syphilis of the nervous system, but a systemic syphilitic infection; it is, however, another symptom to add to the picture.

It is next important to perform a spinal puncture. This is attended with little danger, and with little discomfort if the small 19-gauge needles are used, the skin cocainized, and not over 5 c.c. of spinal fluid withdrawn under aseptic precautions. Three processes are to be undertaken with the fluid:—

1. The globulin content is to be examined. Noguchi has devised a simple means of doing this by adding 0.2 c.c. of spinal fluid to 0.5 c.c. of 10 per cent. butyric acid solution, boiling, adding 0.1 c.c. of normal NaOH (4 per cent.), and boiling again. A flocculent precipitate indicates an increase in globulin. Globulin is increased in all inflammatory reactions of the meninges, whether acute or chronic. It is always excessive in general paresis and cerebral lues. In reviewing his series of cases of cerebral syphilis and general paresis, the author found but 1 that gave a negative reaction.

2. The cells are next counted in the fresh, well-shaken spinal fluid by drawing an acetic acid-gentian violet mixture up to the mark 1 in an ordinary leucocyte-counting pipette, then drawing the spinal fluid to the mark 11, and agitating it. A drop of the mixture is placed upon a special Rosenthal counting chamber and the number of lymphocytes estimated in the same manner that a leucocyte count is made. This chamber is larger, however, so that a different formula is used in computing the result, viz., the number of

cells contained in the entire ruled area, multiplied by 11 and divided by 32. This gives the number of cells per cubic millimeter. The following standard is used: Under 5 cells per cubic millimeter is considered negative; 5 to 9 cells per cubic millimeter is considered doubtful, and over 9 cells, positive. General paretics give a count of from 20 to 300 or over, although usually between 50 and 100. Cerebral syphilis likewise gives a high count, 1 such case having as high as 618 per cubic millimeter. It has been stated that any count over 80 points to cerebral lues rather than to general paresis, but this was not borne out by the author's cases coming to autopsy. The cell count will not differentiate between general paresis and cerebral syphilis. It may be said, however, that the count bears a definite relation to the intensity of the meningeal process. The acute meningitic infection of cerebral lues gives a most marked lymphocytosis, which ranged in the author's case from 56 to 618 mm. Gummatous conditions with some meningeal infection range from 40 to 100 per cubic millimeter, while in endarteritic forms with little meningeal infection the count may be as low as 3 to 5 cells per cubic millimeter. Practically the only other condition that may be considered is tuberculous meningitis, in which there is a lymphocyte count, but the symptoms are quite different and the tubercle bacilli can be recovered from the fluid by direct examination or upon guinea-pig inoculation. Epidemic meningitis is excluded on account of the radically different symptoms and the presence of pus cells and the etiologic organisms in the fluid.

3. The last step in the process is the Wassermann reaction with the spinal

fluid. This in general paresis cases gives almost 100 per cent. of positive results. In cerebral syphilis the percentage is probably only about 20 with the amounts usually used in the test, and by some it is always considered negative. H. P. Carpenter (Albany Medical Annals, May, 1914).

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#### **Traumatic Exfoliative Keratitis.—**

This is a comparatively rare condition, met with chiefly in adult males, and characterized by severe neuralgic pains, lachrymation, photophobia, and a tendency to periodic relapses. As a rule, the causal injury is trifling. Six cases have come under the author's observation. The patients were thin, poorly nourished, and neurotic or arthritic in type. The symptoms are definite and clearly stated: One morning when the patient awakes, simultaneously with the opening of his eyes, he experiences a sharp stab. Touching or rubbing the eye or any subsequent attempt to separate the lids causes a repetition of the same pain. The eyeball is red and vision slightly defective; with or without treatment the attack lessens in severity, and the eye returns apparently to normal in a few days. In four to six weeks, however, a recurrence takes place without warning. The second and third attacks are never as severe as the first; subsequent ones may, however, be quite as bad as the second or third. Relapses take place with more or less regularity every four to six weeks. The only corneal defects are a sort of milky opacity during, and a minute depression or crack in the epithelium after, an attack. If the upper layer of the cornea is touched with a cotton-tipped probe it slides from Bowman's membrane.

The diagnosis must be made from

several corneal diseases and dystrophies. Herpes febrilis corneæ occurs in febrile diseases, especially influenza, pneumonia, and measles, and is associated with an eruption of vesicles on the cornea. Herpes zoster corneæ shows an eruption of vesicles, but is distinguished by running a considerably severer course. Keratitis vesiculosa or bullosa occurs in blind diseased eyes.

The treatment usually recommended consists of bandaging the affected or both eyes, the introduction of neutral fatty substances, and the instillation of cocaine or other drops. The relief obtained from this is only temporary. More permanent relief is obtained by touching the eroded spot with silver nitrate, phenol, iodine, or formalin; but the results are not always certain. The same applies to the use of the curette before cauterizing, while in more than one case opacities have been noticed after this method of treatment.

In the author's case the conjunctival sac was rendered anesthetic and carefully douched with normal saline solution. By means of a Bowman dissection needle several oblique punctures were made into the anterior chamber at and around the seat of the trauma; on each occasion before withdrawing the needle it was turned at right angles on itself to allow the antibody-containing aqueous to escape slowly. As a rule, the epithelium was raised from Bowman's membrane by the fluid. This, with the use of weak hydrogen dioxide lotion and 2 per cent. chloretone in parolene drops, proved sufficient to cure and prevent relapses. P. A. Harry (Lancet, June 13, 1914).

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**Tuberculous Peritonitis, Surgical Interference in.**—The author has operated in 31 cases, 27 in adults and 4

in children, by a technique modified from that of Samuel Lloyd. In nearly all cases the primary improvement was very marked. In some it was only temporary; in others a second operation was required to obtain the ultimate result. In but 4—all in an advanced stage of the disease, with the lungs or other organs also considerably involved—was there no improvement.

The operation consists in an incision 3 to 4 inches in length through the sheath of the right rectus. Upon examination of the viscera and parietal peritoneum, disclosing the diagnosis of tuberculous peritonitis, the patient is eviscerated so far as possible. The intestines, caught in a nest of hot, moist towels, are thoroughly washed with a solution of 50 per cent. commercial hydrogen dioxide. The abdominal cavity is then thoroughly flushed with the same solution, after which it is washed out with equal thoroughness with normal saline solution, as are also the intestines. These are then replaced in their proper position within the peritoneal cavity, which is closed with 3 layers of sutures. Primary union followed in every case operated.

As it is extremely important that these patients be got out of bed and about as soon as possible, primary union is an essential part of the procedure. Hydrogen dioxide seems to help in attaining this end. The author gets his patients out of bed in from eight to twelve days, thoroughly protected by a snug abdominal binder made from adhesive plaster. General treatment for the relief of the tuberculous condition is also instituted.

Hydrogen dioxide is also valuable as a means of diagnosing tuberculous peritonitis in its earliest stages, before it is really perceptible by other means.

When hydrogen dioxide is poured upon the peritoneum, it produces a frosted appearance somewhat similar to that of a window pane on a cold winter's day. After the flushing with normal salt solution, the peritoneum not the seat of tuberculous peritonitis will resume its normal pink color. Where, however, this condition exists, the smallest miliary tubercles will stand forth pearly white upon a pink background. Aspinwall Judd (*New York Medical Journal*, June 6, 1914).

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**Tuberculous Peritonitis, Treatment of.**—Injection of nitrogen is suggested in this condition by the author, who reports the case of a young man who developed tuberculous peritonitis with recurring ascites. There was no benefit from laparotomy twice repeated, Röntgen exposures, or inunctions. After tapping and withdrawing 2.5 liters of ascitic fluid, the author injected 500 c.c. of nitrogen into the peritoneal cavity by the ordinary artificial-pneumothorax technique. Nine days later 600 c.c. were injected without withdrawing the effusion present. A third and a fourth injection of 800 c.c. and 600 c.c. of nitrogen followed, all in the course of two months. The patient improved rapidly and the abdomen appeared free from ascites. Eight months after the beginning of the injections, the patient seemed to have been entirely cured. Brückner (*Berliner klinische Wochenschrift*, January 19, 1914).

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**Typhoid Vaccine, New Method for Therapeutic Use of.**—The use of small repeated doses of 3 or 5 million organisms in the treatment of typhoid is urged by the author. The results by this method are apparently just as



satisfactory as from larger doses. The culture used was ordinary prophylactic stock culture, diluted with freshly boiled water. That these small doses can produce general systemic results is shown by the author's experiment, made with a view to demonstrating that the presence of a local and slight systemic result would be of diagnostic value in cases of typhoid before the appearance of the Widal reaction. The author administered to himself and a hospital matron each 5 million killed organisms of the culture. The amount of the injection was  $2\frac{1}{2}$  minims. Marked local reactions appeared, five or six times the extent in area that would have been produced by similar injections of a sterile innocuous solution, and general constitutional symptoms set in within three or four hours and were severe enough to warn the author never to exceed this dosage with typhoid patients already sick and febrile, until its previous administration had proved harmless. He accounts for the occurrence of the positive local and general reactions on the score of old, long-healed, aborted, or unsuspected typhoid infections, general or local, in the same manner as similar positive tuberculin reactions are explained in apparently healthy non-tuberculous persons.

In each of the author's 10 typhoid cases the initial dose of from 3 to 5 million produced a local arm skin re-

action. In one or two instances there was an immediate temperature rise of from  $0.5^{\circ}$  to  $1^{\circ}$  of a few hours' duration. Ordinarily no such rise appeared, and not a single patient felt any worse for the injection. Though the temperature remained unaltered as a general rule for the first few days following the initial injection, every patient showed a decided improvement in facial expression. All seemed brighter and less typhoidal. This change could be noticed within twenty-four hours. It appears that a positive phase following this dosage is not induced before the expiration of from seventy-two to ninety-six hours. At this point usually a decline in temperature occurs, at times assuming the wide morning remissions and high evening rise characteristic of the third week of the disease. If following any single injection a decline in temperature or a slow lysis is induced, succeeding injections are not repeated until the decline ceases. But the author has almost invariably had better results by repeating the initial dose on the third or fourth day, whether there are indications of decline or otherwise.

If the local reaction at this time be slight or absent, the third dose is doubled. If present and moderate, the next dose is not increased. I. S. Kahn (*Journal of the Texas State Medical Society*, February, 1914).

## Clinical Summary

Practical hints from articles and abstracts that have appeared in the Monthly Cyclopedia and Medical Bulletin during the current year.

**Acne.** TREATMENT. Acne vulgaris in childhood or adolescence responds well to thyroid treatment. Thymus employed with advantage in cases with enlarged thyroid and rapid heart. *Morris.* Page 11

1. Internally: Equal parts of precipitated sulphur and milk-sugar; patient to swallow several times a day as much as is held on tip of a penknife. 2. Externally: Paint at night with a mixture of 10 parts of sulphur, 25 parts of alcohol, and 5 parts of glycerin. 3. Regulate bowels. 4. Meat, eggs, cheese, and sugar to be avoided. 5. Later, a ten- to fourteen-day course of Röntgen-ray exposures, one-third or one-fourth erythem doses being applied at 6 or 8 sittings, to a total of one and a half erythem doses. 6. Four or five weeks after this course, application of mercury quartz lamp for twenty or twenty-five minutes. The skin is to be carefully protected for eight or ten days and then gone over with the comedo extractor, any red spots left being treated with sulphur. *Kromayer.* 357

**Acne Keloid.** TREATMENT. In early cases small, isolated nodules may be excised; they do not recur if the incision is free of the circumscribed sclerotic mass constituting the nodule. *Adamson.* 357

**Acromegaly.** TREATMENT. Case of acromegaly in which thyroid treatment caused headache, dizziness, vomiting, and melancholia to disappear, while pituitary treatment always caused their return. *Salomon.* 30

**Alopecia Areata.** TREATMENT. (1) The B. P. unguentum hydrargyri iodidi rubri (diluted from 4 to 2 per cent.); (2) the unguentum hydrargyri oxidi rubri, with acetum cantharidis, 5j to 3j, and (3) equal parts of sodium chloride and petrolatum found serviceable in this condition. Pure phenol often gave good results. Causes of peripheral nervous irritation, such as carious teeth, errors of refraction, or aural defects, to be investigated. In severe cases pilocarpine nitrate, injected into the scalp every week or fortnight in doses of  $\frac{1}{10}$  to  $\frac{1}{8}$  grain, is sometimes beneficial. *Dore.* 358

**Amenorrhea.** TREATMENT. In amenorrhea, flooding, dysmenorrhea, etc., mammary extract treatment often proves corrective. *Berkeley.* 20

In amenorrhea, relative or absolute, ovarian extract considered best remedy by author. *Bandler.* 91

**Anemia.** TREATMENT. Joint administration of ovarian extract with iron and arsenic in anemias, including chlorosis, in females, recommended. *Bandler.* 91

**Angina Pectoris.** TREATMENT. Concussion at level of seventh cervical vertebrae, together with hypodermic injection of  $\frac{1}{10}$  grain (0.006 Gm.) of pilocarpine, to increase vagus tone, gives relief more promptly than does morphine. *Jarvis.* 160

**Ankylostomiasis.** TREATMENT. Betanaphthol in 30-grain (2 Gm.) doses given the first thing every morning is likely to prove more effectual than eucalyptus or thymol. Starvation of patient during such treatment is unnecessary; in bad cases it may be harmful. *Keith.* 165

**Appendicitis.** DIAGNOSIS. Following sign found valuable in diagnosis of appendicitis in small children, who show no sign of localizing appendicular pain: Upon light pressure over both iliac fossae, the child executes slight movements of the right leg. If the pressure be increased, the right leg becomes rigid and irregular movements of the left leg are executed. Often the face suddenly flushes when pressure is made with the finger over the appendix. *Veau.* 477

TREATMENT. The appendix should always be removed in cases of localized abscess, whether it is free in the abscess cavity or deeply buried by adhesions. Results are far better than where the appendix is allowed to remain, as the author found in a series of 501 cases; not 1 died of peritonitis. The Fowler position, saline proctoclysis, and drainage of the peritoneum with a large split rubber tube inserted to the bottom of the rectovesical pouch should be carried out. *Knott.* 541

**Argyria.** TREATMENT. Hexamethylenamine, 10 grains (0.6 Gm.), caused marked improvement in the patient's coloration in a case of argyria due to collargol. *Crispin.* 542

**Arthritis, Chronic.** TREATMENT. Injections of phenol-camphor used with benefit. Must be made only into joint, never into spongy bone. Formula: Phenol, 30; camphor, 10; alcohol, 30. Only 0.5 or 0.25 c.c. is injected at one point, except in streptococcic processes, where 2 c.c. are necessary. *Pohl.* 235

**Arthritis Deformans.** TREATMENT. Gradual but permanent improvement noted in a number of cases after administration of thymus extract. Pain and swelling disappear and appetite returns. Nucleoprotein extract much preferable to crude gland. Treatment should cover several months, and small doses be continued for some time after apparent cure. *Berkeley.* 20

**Bronchitis, Acute.** TREATMENT. Inhalations of recently prepared tincture of iodine

from wide-mouthed bottles found to cure bronchial catarrhs in four days. Inspirations—from 4 to 8 or more at each sitting—to be more or less deep according to severity of case. Inhalations to be repeated 5 or 7 times a day. If much mucus, expectoration to be assisted by usual remedies. In children iodine tincture may be dropped on pieces of cotton to be laid on pillow (over oilcloth) while patient sleeping. *Torri.* Page 303

**Bronchopneumonia.** TREATMENT. Hot baths, followed by brief cold affusion, in acute bronchitis, bronchiolitis, and bronchopneumonia in young children reduce fever, stimulate expectoration, deepen breathing, exert soporific effect, improve appetite, stimulate elimination through skin, and seem to act specifically in shortening disease. Bath water is at 41° C. (105.8° F.), hot water being added as cooling occurs. Patient is bathed every three hours, up to 5 times a day. Baths particularly appropriate for feeble children who became chilled at periphery with internal temperature high. The weaker the child and higher the fever, the more frequently baths are given. Where the temperature not above 39° C. (102.2° F.), ten-minute bath is given 3 times a day. Hot bath is not contraindicated where temperature exceeds 40° C. (104° F.) in infants or very young children, though for older children warm baths may be substituted. At conclusion of each bath nurse elevates child from hot water so back of neck is exposed, and cold water is dashed once over neck, causing reflex gasp for breath. Child is next reimmersed momentarily in hot water and cold water poured on chest, after which he is dried, wrapped in warmed clothes, and placed in warmed bed. Baths to be continued once daily into convalescence if patient coughs. *Arneth.* 55

**Burns.** TREATMENT. (1) Hypodermic injection of morphine and atropine. (2) Immerse burned area in, or cover with light cloth moistened with, cold water to which has been added 1 teaspoonful of sodium bicarbonate or chloride per quart; continue until morphine effect manifest. (3) Spray or mop burn and surrounding surface with hydrogen dioxide, mop with dry gauze, apply gauze strips dipped in 2 per cent. picric acid solution in dilute alcohol, and cover with thin layer of cotton and adhesive strips or bandage. Allow dressing to remain till soiled, then reapply. (4) About third day, open blisters and mop away contents. (5) Where sloughing: Remove dead tissue as it loosens, cleanse surface with dioxide, dry, mop with picric solution, put on strips of rubber tissue previously kept in 1:1000 mercury bichloride solution, and cover with picric acid compress and cotton. *Plain.* 299

In infected burns a dressing of mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. (3½ ounces), is effectual. *Macfarlan.* 554

**Cancer.** DIAGNOSIS. Marked diminution of the area of cardiac dullness in the recumbent posture, as determined by percussion, found in 87 per cent. of 111 cancerous cases and only 16 per cent. of 107 non-cancerous cases. This sign may be present in cancerous cases that show no wasting. When the sign is present, diagnosis of carcinoma should be rejected only after careful consideration. In some cases the sign has appeared early enough to enable successful resection to be carried out. *Gordon.* 234

**Cancer, Gastric.** DIAGNOSIS. Positive or negative diagnosis made by serial roöntgenography in 616 cases. Of 97 cases operated on, diagnosis found absolutely correct in 94. Gastric cancer at any stage, or indurated gastric ulcer, can be detected by this method as accurately as renal calculi or bone fractures. *Cole.* 301

**Cellulitis.** TREATMENT. Packing infected arm from fingers to shoulders in hot mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection promptly. *Freese.* 304

**Colles's Fracture.** TREATMENT. In reduction soon after the accident, without anesthesia, the most satisfactory method is a sudden, sharp jerk of the wrist administered by clasping one's fingers under the upper fragment, making pressure with the thumbs on the dorsum of the lower fragment, and abruptly pronating the hands. *Allen.* 419

**Conjunctivitis.** TREATMENT. Instillation of a 1 per cent. solution of ethyl hydrocupreine hydrochloride, allowed to remain one-half minute, recommended in pneumococcic conjunctivitis, dacryocystitis, and corneal ulceration. *Sattler.* 481

**Constipation.** TREATMENT. Constipation and rectal irritation in neurasthenics greatly benefited by the perineal and anal douche, hot as can be borne, followed by cold douche at 60° to 50° F.; stronger revulsive effects are obtainable with an alternate hot and cold application. *Pope.* 50

**Corneal Ulcer.** TREATMENT. Bathing part with 1 per cent. ethyl hydrocupreine solution for one-half minute every hour, six hours first day and twelve on next, found rapidly effectual in a case of *ulcus serpens* with hypopyon from chronic dacryocystitis. Sac expressed and conjunctiva cleansed with boric acid before each treatment with ethyl hydrocupreine, which was dropped on the ulcer. Practically specific against pneumococcic infections. *Wiener.* 168

Vioform in 2 to 4 per cent. ointment with petrolatum base, or in 1 or 2 per cent. strength in sterile oil, found useful in ulcers and injuries of cornea and sclera. *Dutoit.* 495

**Coryza, Acute.** TREATMENT. 1. Pill of morphine, ¼ grain (0.01 Gm.), and a small dose of nitroglycerin. 2. In two hours, 10

grains (0.6 Gm.) of acetylsalicylic acid. 3. Hot bath. 4. On following morning, magnesium sulphate. 5. Locally, an ointment containing menthol, methyl salicylate, and oil of wintergreen in a lanoline base, to be sniffed back in nostril frequently, and followed by chloretone inhalant. 6. If discharge, feverishness, and periodic headache persist after a few days, patient should inhale steam from boiling water to which menthol and alcohol have been added. *Wilson.*

Page 484

**Delirium Tremens.** TREATMENT. (1) Withdraw cerebrospinal fluid by lumbar puncture in amounts as large as possible—50 to 60 c.c. (2) Inject with syringe an equal amount of sterile 1 per cent. sodium bromide solution. Immediate improvement in delirium usually occurs, followed by temporary return and then permanent disappearance of delirium. Relapse occasionally after a few days; usually controlled by repetition of injection. *Kramer.*

110

**Dengue.** TREATMENT. Three out of 7 cases were rapidly improved by administration of 30 drops of a 1:1000 solution of epinephrin by the mouth. Epinephrin is likely to prove useful in shortening convalescence in this disease and in mitigating the grave cases. *Khoury.*

329

**Diabetes Insipidus.** TREATMENT. Case in which injections of pituitrin caused marked, though but temporary, improvement. *Farini.*

277

**Diabetes Mellitus.** DIAGNOSIS. Frommer's test recommended for detection of small amounts of acetone. Treat about 10 c.c. of urine with 1 Gm. of sodium hydroxide in substance and without waiting for it to dissolve; add 10 or 12 drops of a 10 per cent. solution of salicylaldehyde in absolute alcohol. Heat to 70° C. In the presence of acetone, marked purple-red color develops at zone of contact with alkali. This test indicates presence of 0.000001 Gm. of acetone. Urine must be diluted so that its specific gravity is about 1.01. *Muhlberg.*

232

TREATMENT. Therapeutic value of an "easy nitrogenous diet" pointed out, i.e., of one consisting almost exclusively of milk and its derivatives, cereals, fruits, and vegetables. Such a diet partially takes off burden of nitrogenous metabolism from liver and tends to relieve its instability as regards glycogenic function, therefore often causing glycosuria to disappear. *Cornwall.*

110

Dry vegetable diet recommended for cases in a state of acidosis. Patient to take daily 10 ounces (300 Gm.) of dried legumins (peas, beans, lentils), 5 ounces (150 Gm.) of butter, 3 to 6 eggs, and 3 to 6 aleuronat or gluten rolls. Green legumins may also be given. Soy beans may be used. This diet to be followed at least 3 days at a time. The starch it contains is better utilized than that of other

foods, glycosuria often being not higher than under a diet poor in carbohydrates. The diet also combats nitrogenous loss; somnolence and anorexia, where present, often disappear, and diaceturia diminishes. *Labbé.*

300

**Diphtheria.** TREATMENT. Iodine ointment used locally in 30 cases. With 2 cotton pledgets secretions and false membrane were first removed and the surface dried, and a third pledget, smeared with the ointment, was then rubbed on the affected surface and surrounding area. This was done every 3 hours, or in severe cases every 2 hours, until improvement occurred. Many cases cleared up within a few hours, becoming free of false membrane on the second or third day. *Thomas.*

364

**Dysentery, Amebic.** TREATMENT. Use of quinine advised as an adjuvant to ipecac in resistant cases of this affection. Successful results were thus obtained in cases that failed to react favorably to emetine. *Brooke.*

417

**Dysentery, Bacillary.** TREATMENT. In acute form: (1) Rest and warm covering; (2) only small amounts of food at a time; (3) calomel at the outset; (4) acid drinks; (5) enemata of saline or soda solution or of methylene blue. In chronic form: (1) Rest; (2) enemata of 1:500 or 1:1000 silver nitrate, 0.25 to 0.5 per cent. tannic acid, 1:500 or 1:1000 thymol, 1 to 2 per cent. resorcinol or creolin, or enemata of gum arabic mixed with bismuth subgallate or iodoform; (3) phenyl salicylate, tannigen, ichthyol, or calomel internally; (4) serum treatment, 10 c.c. in mild cases, 10 c.c. twice at six- to ten-hour interval in medium cases, and 40 to 60 c.c. in severe cases, not exceeding 20 c.c. at a time when serum used daily; (5) appendicostomy or cecostomy with irrigation in severe cases. *Bassler.*

111

Following treatment recommended: 1. Calomel, 5 grains (0.3 Gm.). 2. Barley water and boiled milk for a day or two. 3. Warm applications to abdomen. 4. Six hours after calomel, an injection into bowel of sodium salicylate, 13 Gm. (3¼ drams); water, 650 c.c. (1½ pints) at body temperature, with a small dose of Dover's powder. Injection to be repeated if necessary on alternate days. In children, about 90 Gm. (3 ounces) of the salicylate injection should be used. 5. In chronic dysentery, a 10 per cent. decoction of simaruba bark, 1 dram (4 Gm.) every three hours. *Lutsch.*

481

**Dysmenorrhea.** TREATMENT. Cocaine applied to tuberculum septi in nose and anterior portion of inferior turbinate on both sides, followed by application of trichloroacetic acid over these spots, in 93 cases. Four applications made between periods. Cases with premenstrual headache, nausea, and colic at onset of flow—but without organic pelvic lesions—completely relieved. Of 81 cases sending subsequent reports, 48 had been cured, and 14 improved. *Mayer.*

167

Atropine found very useful, except in cases with high blood-pressure, when pressure must be reduced and cause sought and removed. *Stolper*. Page 235

Following exercise recommended: The patient lies on her back with the knees flexed and one hand on abdomen, and is then directed to see how high she can raise the hand by lifting the abdominal wall, and then depress it by contracting the abdominal muscles. This is to be repeated 10 times, night and morning. Jerky movement is to be avoided. Pain was lessened in many cases and wholly removed in a large number by this method. *Mosher*. 481

Cases of dysmenorrhea due to functional ovarian deficiency are almost invariably relieved by corpus luteum extract—obtained from pregnant cows only—in 5-grain (0.3 Gm.) capsuls taken three times a day. *Dannreuther*. 520

**Eclampsia, Puerperal.** TREATMENT. Report of 2 cases in which pituitary extract injections—2 in each patient—yielded successful results, labor being brought on thereby. *Schlossberger*. 28

**Eczema.** TREATMENT. Both chronic and acute forms respond to thyroid treatment. Fat subjects and those with xeroderma respond best. *Morris*. 11

In mild acute cases paint on lesions an aqueous solution of picric acid several times daily; in more severe cases apply wet dressings of the acid, held by facial mask. Prompt and gratifying results. In subacute and chronic types cure hastened by beginning treatment with two or three days' application of picric acid solution. *Wilcox*. 176

**Edema, Angioneurotic.** TREATMENT. Pituitary and adrenal preparations found useful. *Morris*. 11

**Elephantiasis.** TREATMENT. Case in which Kondoleon's operation was successfully performed, with continuous postoperative improvement. Deep fascia of the leg was dissected off the muscles from the inner and outer aspects of the part, and cut away in one piece. The same area of subcutaneous tissue was removed by splitting it off the skin, the latter being then stitched back in position. Thiosinamine and salvarsan were also used. *Royster*. 546

**Epilepsy.** TREATMENT. Four patients with severe essential epilepsy treated with subcutaneous injections of cerebrospinal fluid, taken for each from another epileptic. Considerable benefit. Dose of fluid injected, 3 to 5 c.c. biweekly or weekly. Improvement striking both as to severity and frequency of attacks. In some, petit mal took place of grand mal. Greatest improvement noticed especially if injected fluid was taken from other patients during recurrent attacks, no matter how slight the latter. *Gordon*. 235

**Epistaxis.** TREATMENT. Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin brought early relief in 5 cases. *Citelli*. 279

**Epithelioma.** TREATMENT. Concentrated sunlight, focused on growth with ordinary magnifying glass, found effectual. Useful where X-rays and radium not available. Invariably successful in obstinate recurrent ulcerative patches on face or nose. Focus sunlight on sore for ten or fifteen minutes at a sitting. If scab present, concentrate rays till burning is felt, then lengthen focus to cover wider area. Induce burning again every few minutes. Treat every day or two till scab easily removed, then apply a little cocaine and after three or four minutes apply rays so as almost to cauterize base of ulcer. Alternate with milder applications for fifteen minutes. Under milder treatments thereafter, at longer intervals, cure usually complete in three to six weeks. *Seelye*. 166

**Erysipelas.** TREATMENT. In severe erysipelas a single small vaccine inoculation,—5 million,—preferably of autogenous vaccine, will usually cause a critical fall of temperature, and a second or third dose at about five days' intervals generally completes resolution. *Whitfield*. 56

In facial erysipelas: Have beside bed bowl of boric acid solution in which ice is placed. Keeping cloths frequently moistened with the solution continuously on face effectually relieves pain and burning. Where leg or arm involved: Wet dressings of boric acid or aluminum acetate. In migratory cases: Ichthyol may be applied or surfaces painted with picric acid solution. *Erdman*. 112

Pyramidon used in 20 cases with uniformly favorable results: Diaphoresis, antipyresis, sedation, fading of eruption, which ceases to spread, and improved general condition. Diuretic beverages also given. Locally, following ointment used: Phenolis, camphoræ pulveris, ana gr. xv (1 Gm.); adipis lanæ hydrosi, petrolati, ana 3ss (15 Gm.). *Satre*. 167

Discomfort and pain more rapidly relieved by picric acid solution than other agents, and edema disappears promptly. *Wilcox*. 176

Two facial cases treated by local applications of hepatic lipid, rapid recovery following. *Tilmant*. 416

Following solution recommended as a dressing for the affected area: Mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. (3½ ounces). *Macfarlan*. 554

**Erythema.** TREATMENT. Epinephrin used in 3 cases of erythematous taches of the face ("red nose"). A 1:1000 solution was given internally in 5-minim (0.3 c.c.) doses in water 3 times daily half an hour before food, and the treatment continued during five to six months (with short intervals). The erythema almost entirely disappeared, and a



year and a half after treatment it had not reappeared. No bad effect on the heart or blood-pressure was observed. *Rothmann.*

Page 348

**Erythema Multiforme.** TREATMENT. Use of a colon bacterin may be of value in this condition. *Hazen.* 542

**Felon.** TREATMENT. Mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection in an unusually short time. *Freese.* 304

Where there is as yet no pointing or definite formation of pus, a wet dressing of mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. (3½ ounces), will usually reduce the course of the affection and frequently abort it. *Macfarlan.* 554

**Fracture of External Malleolus.** TREATMENT. Case of oblique fracture of fibula, involving malleolus, in which, great pain continuing after splinting, the malleolus was exposed by rectangular incision and, after detachment of external lateral ligament, entirely removed. The foot was splinted at a right angle to the leg. Pain ceased, and on the twelfth day the patient could stand on the foot without discomfort. Similar treatment recommended for all detached external malleoli. *Bland-Sutton.* 360

**Fracture of Femoral Neck.** TREATMENT. In adults the author recommends the addition of a side pull to the Buck extension. The side pull is exerted on the upper end of the thigh by means of a weight and pulley, the latter being placed opposite the crest of the ilium. It can be attached to the wall, a standard, or the side of the bed, and should be so adjusted that the pull is upward and outward at an angle of 45 degrees. The amount of weight at the foot of the bed should be sufficient to overcome the shortening, and the side weight about one-third of the foot weight. A well-padded splint of surgeon's felt, or sole leather, should be applied to the inner and under sides of the thigh, coming well up to the perineum, and fastened to the thigh by adhesive plaster encircling the limb. A band made of several layers of gauze or cheesecloth is convenient for the side pull. It should be fastened to the splint by adhesive plaster. By shortening the lower arm of this gauze the limb can be rotated inward, thus avoiding eversion. *Moore.* 361

**Fracture, Ununited.** TREATMENT. Osmic acid, 0.02 Gm. in 1 per cent. solution, injected directly into focus in a case of ununited fracture of fibia and fibula, rebellious for six months. Injection repeated 3 times in two weeks. Patient discharged two weeks later. Stimulating action of the acid on periosteum and marrow confirmed in rabbit experiments. *Segrè.* 307

**Fractures about the Elbow.** TREATMENT. These cases should be started on an internal

right angular splint. At the second or third dressing, while the fragments are still plastic and when the swelling has subsided, the wrist should be slung from the neck, obtaining the most acute flexion possible without too much pain. The flexion is increased at subsequent dressings for two or three weeks, when it is decreased again until all dressings are abandoned at the end of four or five weeks. *Allen.* 419

**Furunculosis.** TREATMENT. Where boil already soft: (1) Paint tincture of iodine freely over and around it; if several lesions close together, paint over entire area. (2) Place gauze pad with 10 per cent. ichthylol in petrolatum over the area, cover with a little cotton, and hold with bandage. (3) Next day, remove pus, wipe with benzine, and reapply iodine and ichthylol. (4) When pus entirely absorbed, discontinue iodine, but apply pure ichthylol. (5) To activate epithelial growth where necessary: Argenti nitratis, gr. xv (1 Gm.); balsami peruviani, gr. lxxv (5 Gm.); adipis lanæ hydrosi, 3iiss (100 Gm.).—For a furuncle not yet softened: (1) Apply iodine. (2) Thick coating of ichthylol, to be allowed to dry on or covered with a little absorbent cotton and gummed adhesive. (3) Next day, wipe off ichthylol with warm water or if possible wash area with soap and water, and reapply iodine and pure ichthylol. (4) Stop iodine on third or fourth day, continuing ichthylol till all inflammation subsided. Single layer of gauze, tissue, or cigarette paper may be applied when ichthylol has dried. *Berger.* 113

In furunculosis of the external auditory canal, cleanse canal of cerumen, discharge, polyps, etc., and insert a wick of cotton, or of gauze if there is a discharge. Ripe furuncles should first have been incised in their centers. The wick is to be kept saturated with alcohol, plain or with boric acid, and should be changed daily. If pain is severe, and no pus can be located, it is best to give a sedative and wait for pointing, rather than incise at random. *Lothrop.* 482

Wet dressing of mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. (3½ ounces), recommended in the early stages of a boil. *Macfarlan.* 554

**Gall-stones.** DIAGNOSIS. In nearly every case of symptoms referable to gall-stones there is some calcium encrusted on the cholesterin core of the stones. The latter can, therefore, be detected with the X-rays. A small diaphragm, 1½ inches in diameter, and a fairly soft tube with rapid exposure should be used. A subsequent bismuth examination usually shows evidences of gall-bladder disease. To distinguish gall-stones from renal calculi, plates should be taken on both anterior and posterior aspects. The anterior plate will show the shadows small and sharp; the posterior, large and blurred; the reverse holds in case of renal calculi. *George and Gerber.* 547

**Gastric Atony, Acute.** TREATMENT. Continuous lavage of stomach through nose recommended. Cocainize nose and work soft oiled tube with 8 to 11 mm. lumen down into stomach. Attach longer tube and carry to receptacle. Amounts up to 5 liters thus drain away. Keep outlet of tube at level of bed to prevent aspiration of mucous membrane. *Grosser.* Page 305

**Gastroenteritis, Infantile.** TREATMENT. *B. lactis bulgaricus* in tablet form administered in 55 cases, varying in severity from moderate degrees of infection—6 stools a day—to the most grave—20 or more. From 3 to 10 tablets a day were given to each infant, according to the gravity of the illness. Results: 43 gained in weight; 2 lost; 3 gained and later lost, and 7 showed no change. There were no deaths. The temperature came down to normal within one to three days, and in two or three days the stools became yellowish or brown, well formed, and free from curds, mucus, and blood. *Schwartz.* 364

**General Paralysis.** TREATMENT. Remissions may be prolonged by suitable doses of tuberculin ( $\frac{1}{1000}$  to  $\frac{1}{5000}$  mg. of tuberculin residue). *Jackson.* 236

**Glaucoma.** TREATMENT. In non-inflammatory glaucoma, when operation is consented to, Elliot's sclerocorneal trephining is by far the safest procedure and the most productive of results. In 29 cases thus treated there were no serious complications at operation in any case. Seven eyes with absolute glaucoma were preserved that formerly would have been removed. In 7 other eyes which were slightly a small degree of vision was gained by the operation. In the remaining 15 the eyes gained considerably in vision and usefulness. *Reber.* 362

**Goiter.** TREATMENT. Vaccines prepared from coliform bacilli of patient's own bowel administered in 8 cases of parenchymatous goiter, with disappearance of enlargement in one and diminution in the others. Initial dose usually 125 million, later increased, upon diminution of size of goiter, by 25 or 30 million weekly. Injections given weekly. *Langmead.* 23

Salicylates, creosote carbonate, menthol, thymol, etc., are helpful after the intestinal functions have been regulated. In nodular, cystic, colloid, fibrous, and intrathoracic goiters, iodine is seldom of value and sometimes dangerous. *Sajous.* 1

Colloidal silicon injections used with benefit in a case of simple goiter. Trial of this measure is advised in both simple and exophthalmic goiter before operation is resorted to. *Suard.* 345

**Goiter, Exophthalmic.** TREATMENT. Ligation of thyroid vessels and sometimes a portion of the gland is indicated (1) in patients with mild symptoms of hyperthyroidism; (2) in the large group having acute, severe exophthalmic goiters, and the chronic,

very sick patients who, having exhausted all forms of treatment, are suffering from various secondary symptoms, and (3) in cases with marked pulsation and thrill of thyroid arteries associated with cardiac dilatation and loss of weight. Thyroidectomy later advisable, to prevent relapse to former condition. Should trouble recur before a partial thyroidectomy is made, or a severe relapse after partial extirpation, inferior thyroid artery should be ligated and half of remaining lobe removed when improvement occurs. *Mayo.* 16

In early and mild cases in virgins, author begins treatment with corpus luteum, which is useful as antidote to thyroid intoxication. *Berkeley.* 20

Report of cases improved by administration, for several months, of 20 to 30 Gm. (5 to 8 drams) of quinine divided among twenty days in each month. *Gaultier.* 90

Next to operative treatment, where indicated, repose is important. The patients should be gotten out of their ordinary environment. A trip to an altitude of about 3600 feet often acts favorably, starting first at 1500 feet. The patient should be well nourished, on a carbohydrate-fat mixed diet. Galvanic stimulation of the neck is often useful; the anode being on the sternum and the cathode behind the angle of the jaw, a current of 1 or 2 milliampères should be slowly turned on for one to three minutes and then slowly turned off. *Bauer.* 411

Strophanthus administered in exophthalmic goiter with good results. Quinine may be simultaneously used. *Bate.* 513

X-ray exposure of the ovaries carried out in 10 cases of exophthalmic goiter, with favorable results. A gain in body weight followed in 8 cases, the exophthalmos was diminished in 4 and removed in 1, tachycardia was sometimes considerably reduced, and in 9 very marked subjective improvement was noted. Diarrhea ceased in 3 cases after the first exposure. Although no complete cure was effected, the author was led to conclude that, in the usual cases of moderate severity, irradiation of the ovaries yields more certain and rapid effects than the measures customarily employed. *Mannaberg.* 529

**Gonorrhea.** TREATMENT. Iodine treatment gave excellent results in gonorrhea in the female: (1) Swab external genitals with a 3.5 per cent. solution of iodine in alcohol; (2) force a few drops of same solution in orifices of Skene's and vulvovaginal glands through blunt hypodermic needle; (3) with patient in Sims's position, insert Sims's speculum, swab vagina dry with cotton, and paint cervix with iodine solution; (4) swab posterior vaginal cul-de-sac and wall; (5) introduce narrow strip of gauze high up against posterior wall, and remove speculum; (6) give hexamethylenamine, 5 to 7½ grains (0.3 to 0.5 Gm.) four times daily in plenty of water. Where cervix and uterus chronically involved: (1) Paint cervix with iodine; (2)

grasp anterior lip with volsellum and remove any stringy discharge; (3) insert small uterine sound if required; (4) introduce intra-uterine syringe to fundus and instill 1 dram (4 c.c.) of iodine solution while withdrawing; (5) treat vagina as in acute cases. Repeat applications every third day in both acute and chronic forms. In all cases order hot douches of 4 to 6 quarts (liters) of hot saline two to four times daily, always followed by a 1-quart (liter) injection of 1:5000 permanganate or 1:250 picric acid. *Hofmann.*

Page 48

Best results are obtained by the "sealing-up" method when the patient is seen within forty-eight hours after the beginning of the discharge. A 5 per cent. solution of argyrol, to the amount of 25 minims (1.6 c.c.), is sealed within the urethra for six hours on each of five consecutive days, with non-contractile collodion. The latter can best be removed with cotton soaked in acetone. During the six-hour period no liquids should be ingested. After the urethra has been emptied, however, the patient is required to drink a quart of water to flush out the parts. Next day he should prepare himself for the treatment by limitation of fluid ingesta. *Ballenger and Elder.*

557

#### Gonorrheal Vaginitis of Children.

**TREATMENT.** Mixed autogenous vaccines of gonococcus and usually staphylococcus, streptococcus, diplococcus, colon bacillus, etc., used in 40 cases with uniformly good results. Average number of injections required for cure, 7. Initial dose, 25 to 50 million, then gradually increased. Interval between injections not less than five nor more than seven days. If after six weeks case still needs treatment, as shown by examination of discharges, a second vaccine should be made. *Wolff.*

49

**Headache.** **TREATMENT.** In headache or head pressure in nervous fatigue a fomentation applied for five or ten minutes twice, and followed by a cold compress, is effective. If headache is congestive, use hot foot bath, followed by ice-bag to nape of neck and cold compress to forehead. Sitz baths at 90° F., or cold foot baths, often relieve. *Pope.*

50

**Hemoptysis.** **TREATMENT.** Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin nearly always brings relief in average cases. Where first injection fails, give a second, and later if necessary a third, the latter intramuscularly. *Citelli.*

279

Intravenous injections of 0.5 c.c. of pituitrin were followed almost at once by cessation of hemorrhage in 10 out of 12 cases. Where the hemorrhage recurred on succeeding days, the same prompt relief was obtained. *Rist.*

411

**Hemorrhage, Cerebral.** **TREATMENT.** Venesection used with good results and recommended in cases of apoplexy in full-blooded patients with blood-pressure of 200

mm. or more. Amount of blood let in author's cases, 12 to 48 ounces. Where vein at elbow not easily found in stout persons, there are usually varicose veins in legs which can be opened. *MacFarlane.*

121

**Hemorrhage, Gastrointestinal.** **TREATMENT.** Iodine tincture in small doses at short intervals found effective in checking hemorrhage and diarrhea in 6 cases of typhoid fever and in 4 of gastric ulcer. It also relieves abdominal tenderness in the latter condition. *Nottebaum.*

484

**Hernia.** **TREATMENT.** Inversion of hernia recommended in patients who take anesthetic poorly and maintain strong expiratory efforts, forcing viscera into sac under pressure. Primary union and cure of hernia in each of author's 7 cases thus dealt with. *Haynes.*

170

**Herpes Labialis.** **TREATMENT.** Picric acid solution causes rapid drying of lesion and tends to prevent extension. *Wilcox.*

176

**Hodgkin's Disease.** **TREATMENT.** Benzene, 5 minims (0.3 c.c.) three times daily at first, then increased to 10 minims (0.6 c.c.), caused marked regression of enlarged nodes, beginning two weeks after treatment begun, in a case previously treated unsuccessfully with X-rays. The 10-minim dose was continued for six weeks. *Lawson and Thomas.*

173

**Hyperchlorhydria.** **TREATMENT.** Cream diet considered useful. (See Ulcer, Gastric.) *Nichols.*

169

Following measures recommended: (1) Magnesium oxide, combined with sodium sulphate and belladonna in small amount. (2) All food to be well cooked and most carefully minced. (3) Patient to take 2 or 3 meals at two-hour intervals in forenoon, but nothing after lunch until 7 P.M., when only porridge to be taken. (4) Fluid intake to be generally diminished and restricted to hours when stomach not filled with food. (5) In severe cases, or where gastroptosis: Rest in bed for two or three weeks. (6) Hot compresses twice daily for two hours; cold compresses at night. (7) If hyperacidity arises on basis of a catarrh: Rinse empty stomach in morning with 1:1000 salicylic acid or 1:500 silver nitrate solution. (8) Bowels to be carefully regulated. *Schmidt.*

302

**Hyperthyroidism.** **TREATMENT.** Injection into enlarged thyroid of 1 to 4 per cent. solutions of quinine and urea hydrochloride caused marked improvement in 3 cases. *Watson.*

265

**Ileus.** **TREATMENT.** Continuous lavage of stomach through nose recommended in duodenojejunal occlusion, postoperative bowel paralysis, ileus from adhesions, spasmodic contraction from peritonitic reflexes, and vicious circle after gastroenterostomy. (See Gastric Atony, Acute.) *Grosser.*

305

**Impetigo.** TREATMENT. In exceptional cases which do not yield to local measures, a few staphylococcic vaccine inoculations—usually, in fact, a single one—will cause prompt cure. *Whitfield.* Page 56

**Infections, Local.** TREATMENT. Following summary of serviceable measures present: *A.* Inflammations with slight serum exudation, but with redness, heat, swelling, pain, and loss of function: 1. Rest. 2. Elevation. 3. Hot, wet dressing.—*B.* Where much serum exudation, but slight tendency to necrosis: 1. Incision. 2. Place gauze in wound saturated with Chlumsky's solution. (Camphor, 60 parts; phenol, 30; alcohol, 10.) 3. Wet dressing; keep wet. 4. Remove gauze in twenty-four hours. 5. Insert rubber drain. 6. Apply wet dressing.—*C.* Where marked necrosis: 1. Incision. 2. Drainage. 3. Wet dressing. 4. After inflammation receded, Durante's solution. (Iodine, 1 part; potassium iodide, 10; guaiacol, 5; glycerin, to make 100.) 5. Dry dressing. *Hoag.* 307

**Insanity.** TREATMENT. Recovery in manic-depressive insanity may be hastened by stimulation of leucocytosis by injection of 1 c.c. of terebene subcutaneously in the flank. *Jackson.* 236

**Insolation.** TREATMENT. 1. Ice packs or iced baths, for a few minutes at a time only, and to be discontinued when rectal temperature has reached 104° F. 2. Saline solution. If used by rectum, formula should be: Sodium chloride, 30 Gm.; sodium carbonate (crystallized), 20 Gm.; water, 1000 c.c. Introduction should last one hour. If used intravenously: Sodium chloride, 14 Gm.; sodium carbonate, 10 Gm.; water, 1000 c.c. The salt solution should be made first and boiled, and the carbonate crystals then added. 3. Digitalis, only where the preceding fails to excite diuresis. 4. Later, for headache: Acetanilide, acetphenetidin, or salicylates, with due caution. 5. For sleeplessness: bromides, trional, etc. 6. In apyrexial heat exhaustion, ice packs or baths are uncalled for, but saline solution should be administered, and combined with friction, massage, warm packs, and sufficient internal stimulant medication. *Woolley.* 548

**Insomnia.** TREATMENT. In nervous fatigue (neurasthenia) this symptom is best met by cold pack or dripping-sheet at bedtime, or by the trunk compress, consisting of a coarse linen bandage wrung out of water at 65° F. and covered by several layers of same material to exclude air; it should be worn all night. Excellent also is the neutral bath at 94° to 96° F. for from twenty to sixty minutes. *Pope.* 50

**Intertrigo.** TREATMENT. Paint picric acid solution on surfaces and separate them with thin layers of absorbent cotton. In the more severely infected cases wet dressings of picric acid. Prompt results. *Wilcox.* 176

**Intestinal Motor Inactivity.** TREATMENT. Pituitary extract recommended. Injection of 3 c.c. in adults causes evacuation in 88 per cent. of cases in from six to twenty minutes. Usually constipation later recurs, but often a single injection will induce several stools on same day and keep bowels regular for a day or two after. The extract is valuable for prophylaxis and cure of postoperative intestinal paresis. Continued, it tones up intestine and also stimulates stomach motility. For lasting effect, inject ½ c.c. intramuscularly every day for a week, then 1 c.c. every three days for another week, and thereafter 1½ c.c. once weekly. *Houssay and Beruti.* 27

**Intestinal Stasis, Postoperative.** PROPHYLAXIS. Harmful effects of abrasion of visceral peritoneum in operations can be overcome by introducing 6 ounces (180 c.c.) of sterilized mineral oil in abdomen and sponging it over coils of intestine. *Burrows.* 52

**Iodine Poisoning.** TREATMENT. Calcium lactate internally found useful in 2 cases of iodine poisoning from a course of potassium iodide. *Von den Velden.* 418

**Lumbago.** TREATMENT. Salicyl compounds or a 10- or 20- grain (0.6 or 1.2 Gm.) dose of quinine at onset of condition useful. Rochelle salts, ½ to 1 dram (2 to 4 Gm.) every hour or two until urine alkaline and bowels freely moved, also valuable. "Walking the lumbago off" may succeed if free perspiration accompanies the exercise. Turkish bath in early stage safer and more effective. Later: Rest, dry cups locally, deep massage, faradic current, and, if salicylates fail, iodine, in vegetable protein combination. *Henry.* 175

**Lupus Erythematosus.** TREATMENT. Benefit followed use of adrenal substance in this condition. *Morris.* 11

**Lupus Vulgaris.** TREATMENT. Where Finsen light not available, old tuberculin is capable of great service. Begin cautiously; then make steep rise in dose as soon as one dose ceases to call forth reaction. *Whitfield.* 56

Gold and potassium cyanide injected intravenously in 12 cases. Single dose, 0.01 to 0.05 Gm. Results good. Course of 12 to 14 injections followed by interval of two to three weeks, after which another treatment given. Even in severe cases, therapeutic results better than with tuberculin and other measures. *Poór.* 236

**Lymphosarcoma.** TREATMENT. Case with growth beneath sternomastoid muscle, recurring after removal, in which injections of Coley's fluid, chiefly into the swelling itself, caused the latter to disappear, with no evidence of recurrence one year later. Initial dose was ½ minim (0.03 c.c.), gradually increased for three weeks, an injection being given daily, until 10 minims (0.6 c.c.) was reached. This was continued two more

weeks, and later another course of injections, on alternate days for a month, was given. *Spencer.* Page 549

**Malaria.** TREATMENT. In all cases the blood can be sterilized of plasmodia by giving 30 grains (2 Gm.) of quinine daily for three days, followed by 30 grains on the same day of the week on which the last of the three days fell, for a period of six weeks. The sulphate should be used; its solution should be effected in the stomach, either by exciting the flow of gastric juice or giving a little hydrochloric acid. Where life depends upon immediate introduction of quinine—in comatose or cerebral forms chiefly—a soluble salt, usually the hydrochloride, should be given intravenously, well diluted with salt solution, in doses of 10 grains (0.6 Gm.), which will kill as many plasmodia as any larger dose. The drug need not be injected oftener than every eight hours. The intravenous route should be used until the drug can be given by mouth. *Bass.* 550

**Mammary Abscess.** PROPHYLAXIS. Threatened mammary abscess underwent absorption in 2 or 3 cases soon after administration of pituitary extract. *White.* 283

**Myasthenia Gravis.** TREATMENT. Pituitary extract, combined with ovarian, found useful in 2 cases. *Lagane.* 85

**Nasal Catarrh, Chronic.** TREATMENT. Lavage with a solution of powdered boric acid, sodium bicarbonate, and sodium chloride in equal parts (with a little menthol added), 1 teaspoonful to a pint of tepid water, recommended. A ball-syringe should be gently used in carrying out the measure. Where local dryness is marked, the following oily spray is useful: Menthol, gr. v (0.3 Gm.); camphor, gr. ij (0.12 Gm.); oil of eucalyptus, ℥ij (0.2 c.c.), and oil of sweet almonds, enough to make fʒj (30 c.c.). *Wilson.* 484

**Nephritis.** TREATMENT. Case of chronic interstitial nephritis, already in uremic convulsions, in which renal decapsulation was performed. A narrow strip of capsule, about ¾ inch wide, was left on each side of the renal pelvis to form a cradle; for the suspension of the kidney a strong ligature was passed twice through each tag, the ends being carried through the adjacent muscles. The patient made an uneventful recovery; one year later he had gained 34 pounds and the urine showed no casts, albumin, or cells. *Lynch.* 545

**Neuralgia.** TREATMENT. Carbon disulphide, applied locally for fifteen seconds, often promptly relieves neuralgias, headaches, and nearly all local pains. *Seelye.* 542

**Night-sweats.** TREATMENT. Better results are obtained in the night-sweats of tuberculosis with aromatic sulphuric acid than with either agaricin or atropine. *Adams.* 552

**Obesity.** TREATMENT. Colloidal hydroxide of palladium, suspended in olive oil and

liquid paraffin in proportion of 25 mg. of palladium to 1 c.c. caused marked loss of weight, without untoward action except some local irritation, in 2 cases of obesity. Dose, 2 c.c. of suspension, injected under skin of abdomen. *Kauffmann.* 116

**Osteomalacia.** TREATMENT. Case in which excellent results obtained from epinephrin, injected in doses of 8 minims (0.5 c.c.) of 1:1000 solution, daily, in 2 series of 9 injections each. Patient finally discharged cured. *V. Salis.* 278

**Ozena.** TREATMENT. Use of sugar recommended. For first week or two surgeon should carry out treatment himself, and precede sugar by removal of crusts from nose, softening them if necessary with hydrogen dioxide or sodium bicarbonate solution. Patient to use nasal syringe once daily. After crust removal, massage mucosa with cotton-tipped probe; then nostrils may be packed with ribbon gauze soaked in simple syrup, to be removed in twelve hours. Repeat this treatment on alternate days. After a fortnight patient can insufflate powdered sugar himself. *Harry.* 175

**Paralysis Agitans.** TREATMENT. Good results from administration of thyroid and parathyroid preparations with calcium chloride. *Gauthier.* 86

**Pericarditis, Adhesive.** DIAGNOSIS. Retraction of the chest wall circumscribed along the left costal arch between the parasternal and anterior axillary lines, and with pulsation, is pathognomonic. To examine for retraction one should lay one hand on the lower part of the sternum and the other on the spine opposite; the patient then taking a deep breath, the chest is felt to grow narrower and a distinct systolic retraction perceived. Preference of edema for the upper part of the body, as well as the paradoxical engorgement of the neck veins during inspiration, are also characteristic. *Tornai.* 424

**Perinephric Abscess.** DIAGNOSIS. Pain referred to lower limb of same side found of considerable diagnostic value. There are both pain and tenderness, particularly marked along external cutaneous nerve just below anterior superior spine and on external aspect of thigh. *Belikov-Chtomitch.* 117

**Phlebitis, Chronic.** TREATMENT. Local alternate hot and cold submersions and spray advised. Two tubs or pails are used, one containing cold water and the other water at 110° F. The affected limb is first submerged in the hot water for thirty seconds, then in the cold for fifteen seconds. This alternation is gone through 10 times, ending with the cold-water submersion. The part is then gently rubbed until the skin is dry and red, showing proper reaction. Gentle stroke massage in the direction of the venous flow is then to be carried out for ten minutes, the skin dusted with talcum powder, and an



elastic support applied. The spray method (spraying with sponges of hot and cold water or a nozzle-spray attachment), applied for the same length of time, is useful to treat the upper parts that cannot be submerged. *Foster.* Page 424

**Placenta Previa.** TREATMENT. In marginal variety, inject 30 minims (2 c.c.) of pituglandol and at once rupture membranes. In central variety, according to extent of dilatation, perform version or introduce metreurynter and give pituglandol. Metreurynter generally expelled spontaneously in one-half hour. Then perform version and give second dose of pituglandol. *Gall.* 280

**Pleurisy.** TREATMENT. Autoserotherapy recommended in all cases of serofibrinous pleurisy in which pyemic infection is absent. A positive cure may be expected in over 80 per cent. of cases. In large effusions causing severe dyspnea and pain one should aspirate 10 to 200 c.c. of fluid and, before withdrawing the needle entirely, reinject 2 to 3 c.c. under the skin. Immediate relief from symptoms and a more rapid absorption of the exudate will follow. The injections should be repeated every other day until decided improvement takes place. *Pfender.* 417

Use of calcium lactate internally in pleurisy is indicated only when the effusion constantly recurs after puncture. *Von den Velden.* 418

Injections of 1:1000 epinephrin hydrochloride solution made into the pleural cavity in 20 cases, with constantly very favorable results. The amount injected was at first 0.3 c.c. (5 minims), and on the four or five succeeding days 0.2 c.c. (3.3 minims), in saline. Temperature began to descend on the third day, and the effusion underwent rapid absorption. *Wedensky.* 534

**Pneumonia.** TREATMENT. Ethyl hydrocupreine hydrochloride given internally in pneumococcic lung inflammation, with good results. Dose usually 0.5 Gm. (7½ grains) *t. i. d.*, daily amount not exceeding 1.5 Gm. (23 grains). In 9 cases no other medication was employed; in all of these temperature fell more rapidly, by crisis or lysis, than with other methods. No untoward after-effects. *Vetlesen.* 118

Vaccine treatment advised. First give polyvalent stock vaccine of pneumococcus and streptococcus, of each, 30 million, as soon as possible. Make sputum smears and cultures, blood-cultures in early cases, lung puncture in late ones, and prepare autogenous vaccine. If no definite response in twenty-four to forty-eight hours, repeat or preferably give autogenous vaccine. If still no response in thirty-six or forty-eight hours, double the dose. If there is response, as shown by improved clinical symptoms and signs, increased well-being, etc., defer reinoculation three days, or until the first symptoms of retrogression in general condition or physical signs occur. Maintain the dosage or increase it every

two or three days until the patient entirely well. Generally about three doses are necessary. Average mortality with vaccine treatment only 5 to 10 per cent. Convalescence shortened and danger of complications lessened. In severe cases also give 20 to 30 grains of sodium citrate every two or three hours. *Craig.* 238

Epinephrin, 8 minims (0.5 c.c.) of 1:1000 solution in 1 pint (500 c.c.) of saline solution subcutaneously, caused prompt improvement in a desperate case. *Lonhard.* 281

Camphor-injection treatment recommended. A 30 per cent. preparation of camphor in oil of sesame, sterilized in a boiling water bath, should be used. As soon after the initial chill as possible, 2½ fluidrams (10 c.c.) of the preparation per 100 pounds of body weight should be injected hypodermically every twelve hours except in bilateral pneumonia and in severe toxemia, when injections should be made every six to eight hours. The site of injection should be the outer thigh or abdomen. The injection should be made slowly and the oil gradually deposited below the subcutaneous fatty tissue and not into it. *Cruikshank.* 426

**Poliomyelitis, Acute.** DIAGNOSIS. Pre-paralytic symptom: A peculiar, twitching, tremulous, or convulsive movement of certain groups of muscles, lasting from a few seconds to somewhat less than a minute. Usually affects part or whole of one or more limbs, face, or jaw, but sometimes whole body. Duration of spells short at first. Often accompanied by a cry similar to hydrocephalic, or by brief period of unconsciousness. *Colliver.* 177

**Pruritus Vulvæ.** TREATMENT. In 2 cases of this condition associated with the menopause the itching was with great promptness relieved by internal administration of an extract of the corpora lutea of pregnant cows. *Dannreuther.* 520

**Psoriasis.** TREATMENT. Thyroid preparations found especially efficacious in psoriasis associated with adiposity. They should not be exhibited until eruption is fully developed. *Morris.* 11

Low nitrogen diet found to have very favorable influence upon psoriasis eruption, especially when extensive. Severe cases improve under such a diet almost to the point of disappearance of the eruption. *Schamberg, Kolmer, Ringer, and Raiziss.* 178

Application of picric acid solution brings immediate and constant relief from itching. *Wilcox.* 176

**Puerperal Fever.** PROPHYLAXIS. Whenever irrigation of vagina with boiled water through speculum yields a yellowish fluid, one should irrigate once daily for at least ten days with a 1:200 solution of lactic acid. Morbidity thereby reduced from 28.6 to 7.6 per cent. Full baths to be avoided before delivery. *Zweifel.* 54

**TREATMENT.** Intravenous injections of distilled water given in 142 cases of puerperal fever. Of 62 patients with pyemia and septicemia, 42 were cured. In an hour or hour and a half after an injection there is usually a chill, with rise in temperature. By evening or the following morning temperature will have fallen to normal, sweating usually accompanying the drop. *Ilkewitsch.* Page 53

**Puerperal Sepsis.** **TREATMENT.** Fixation abscess recommended in this and other severe infectious states, including pneumonia, appendicitis, typhoid fever, etc., whenever condition seems to be taking a turn for the worse. Inject 2 c.c. of pure oil of turpentine under gluteal skin. When abscess forms, evacuate through small incision (do not drain) and apply Bier cups twice daily. Excellent results in 18 cases. *De Lostalot.* 168

Abstinence from curettage in cases of sapremia advised. Instead, one should dilate cervix, using first a dressing forceps, then a small dilator, and lastly a large dilator. After this, strips of gauze should be soaked in a 50 per cent. dilution of tincture of iodine. One strip is to be introduced into the uterus with a uterine sound, left about a minute, and then replaced by another. As a rule, from 5 to 8 strips are thus used. When a drain is required, the last strip is left in the uterus, to be removed later in about eight hours. *Welton.* 487

In the septicemic form, local disinfection of the genital canal is the first measure requisite. If temperature does not subside, or rises again, intrauterine douching with the following solution is advised: Tincture of iodine 2 fluidrams (8 c.c.); 95 per cent. alcohol, 8 fluidounces (240 c.c.), and sterile water, enough to make 2 quarts (liters). Once daily is sufficient. If a sharp rise in temperature follows, local disinfection should cease. An easily digested, largely liquid diet is indicated. Enteroclysis and serum treatment are at times useful. Continual septic symptoms plus an abdominal mass, palpable above the symphysis or Poupart's ligament, call for laparotomy. *Hirst.* 490

**Pyloric Spasm.** **TREATMENT.** Atropine in a certain proportion of cases brings relief. The author found that epinephrin hypodermically procures complete and lasting relief in most instances. In 2 cases the palpable pyloric tumor could be felt to melt away under its influence. Prolonged gastric lavage, using water at 105° F., also has a happy effect in relieving spasmodic stomach conditions. *Stockton.* 367

**Pyorrhea Alveolaris.** **TREATMENT.** Sensitized vaccine against streptococcus, staphylococcus, pneumococcus, and bacillus of Friedländer used in a number of cases. After 2 injections, mechanical and dental treatment added. After 4 or 5 injections, teeth clean and firm, and organisms gone. Three or four supplementary injections

given. No recurrence in six months. *Bertrand and Valadier.* 304

**Rabies.** **TREATMENT.** Potassium iodide in 2 per cent. solution, 1 tablespoonful or dessertspoonful at frequent intervals throughout course of preventive injections, recommended as adjuvant in treatment. In 3 cases of abortive rabies symptoms promptly disappeared after use of potassium iodide. Advocated especially in cases where infection has existed in latent condition for some time. *Koch.* 55

**Rachitis.** **TREATMENT.** Pituitary extract given to 16 young children with rickets, and effects compared with controls. After a few weeks of pituitary, the children were able to stand and began to walk; fontanelles began to close and growth of teeth was considerably accelerated. Osseous tenderness gradually diminished, weight was gained, and musculature became firmer. *Weiss.* 218

**Retention of Urine, Postoperative.** **TREATMENT.** Pituitary extract injected intramuscularly in 21 puerperal and 24 postoperative cases with excellent results. *Ebeler.* 91

**Rheumatism, Acute.** **TREATMENT.** Intravenous use of sodium salicylate resorted to in 12 cases, 130 injections in arm veins being given in all. A very fine, sharp needle should be used. The solution is made by dissolving 10 Gm. of C. P. crystalline sodium salicylate in 50 c.c. of distilled water freshly sterilized by boiling. Each cubic centimeter contains 3 grains (0.2 Gm.) of the salicylate. Usually the dose was 15 or 20 grains (1 or 1.25 Gm.) and injections were given at twelve- or eight-hour intervals over a period of three to six days. Occasionally, in robust men, 30 grains (2 Gm.) were given, and as much as 120 grains (8 Gm.) in the first twenty-four hours, without unpleasant effects. Relief of pain was prompter and more pronounced than from oral administration. The method is indicated in patients unable to retain the drug by mouth; those who show little or no response to the usual method; to start the treatment with a few intravenous injections where pain is intense, and in cases with threatening heart complications, or in severe rheumatic affections of the eye. *Conner.* 428

**Ringworm.** **TREATMENT.** Body ringworm more easily controlled by painting on picric acid solution than by usual antiseptic ointment. *Wilcox.* 176

Wash part with a strong solution of sodium bicarbonate, swab with a mixture of 1 part of ether to 2 parts of alcohol, dry, paint with a 2.5 per cent. tincture of iodine, and apply immediately an ethyl chloride spray until the skin gets china white. In twenty-four to forty-eight hours the patch of ringworm will have become quiescent. Next tiny spots should be looked for and similarly treated. In ringworm of the scalp 3 or 4 applications of iodine and spray are required,

but on the face or smooth surfaces 1 application suffices. *Foley.* Page 429

**Scarlet Fever.** TREATMENT. Iodine ointment used locally in 19 cases (see Diphtheria). These cases were unusually free from local complications. *Thomas.* 364

**Sciatica.** TREATMENT. Eight cases treated by injections of 4 per cent. quinine and urea hydrochloride in salt solution into subcutaneous tissue over course of nerve. Fifty injections in all, without untoward results. Always decided relief after first injection and no further attack after third. Injections daily for 4 doses, then every other day until patient entirely relieved. Two cases of facial neuralgia also treated, with complete relief after second injection. *Cables.* 119

**Scorbutus.** TREATMENT. Calcium lactate, 45 grains (3 Gm.) a day, found a valuable measure. *Von den Velden.* 418

**Sinusitis, Frontal.** TREATMENT. In a number of acute cases marked relief was noted—because of the free rhinorrhea set up—from the intranasal use of the following solution: Mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. (3½ ounces). *Macfarlan.* 554

**Skin-grafting.** Following method of dressing skin-grafts just after their application described: Strips of gauze, 6 to 8 layers in thickness, are thoroughly impregnated and buttered with sterile 33½ per cent. bismuth paste (Beck's paste). These are laid over the grafts smoothly for 2 or more inches beyond the wound. No wrinkles or folds should remain. Over these is placed a layer of absorbent cotton, and the whole he'd firmly by a roller bandage. The first dressing should be done on the fifth day, great care being exercised in the removal of the primary dressing. A similar dressing is reapplied and subsequent dressings done every third or fourth day as required. At about the fifth dressing one can peel from each graft a thin film of dead cuticle, leaving a firm, pink, healthy graft in position. *Coerr.* 358

**Spasmophilia in Children.** TREATMENT. Combined treatment with phosphorized cod-liver oil and milk curds from which the whey had been removed by washing with water (thus removing all mineral salts) was employed in 12 cases. A cure was obtained in 9 cases within a week, twice at the end of the second, and once in the fourth week. There was loss of weight, but this was soon made up on return to full milk diet. *Bernheim-Karrer.* 368

**Syphilis.** DIAGNOSIS. Luetin test valuable as diagnostic measure in tertiary and latent stages of syphilis, indicating a state of hypersensitiveness to spirochetal proteins induced by a period of cessation of introduction of these proteins previous to the test. Provocative injection of salvarsan,

followed by both Wassermann and luetin tests, suggested to ascertain whether treatment has been curative in a given case. *Foster.* 179

Diminution in the bone conduction of sound, with otherwise normal hearing, is one of the earliest signs of constitutional syphilis. A tuning fork is struck and placed on the patient's mastoid process. When he no longer hears it, it is placed upon the physician's mastoid. If it is still audible to him, the test is positive, provided the patient's hearing was otherwise acute. The sign is positive also in brain tumors, hydrocephalus, epilepsy, and tetany. *Beck.* 491

TREATMENT. Epinephrin, 15 to 20 drops of 1:1000 solution in a little water by mouth, advised ten to fifteen minutes before injection of neosalvarsan, to prevent "nitritoid" symptoms, arising in some patients from the latter, e.g., facial congestion, tingling in throat, nausea, and vomiting. *Galliot.* 212

**Tetanus.** TREATMENT. Case of tetanus in which, after the original wound and scar has been excised and pure phenol applied, subcutaneous injection of phenol was started, 1 fluidounce of a 1 per cent. solution being given. The strength of the solution was raised to 3 per cent. The groins and right axilla were treated alternately. Chloroform was administered at each injection owing to the spasms produced by the needle-prick. The urine retained its normal color throughout. No antitetanic serum was given. Recovery followed. *Reynolds.* 556

**Tonsillitis, Ulcerative.** TREATMENT. After thoroughly washing surfaces and crypts, apply 10 per cent. silver nitrate solution over ulcerated surface and carry down into crypts as well. Then dust thymol iodide with powder blower over gland and throw it into diseased lacunæ. Where tonsils seat of recurring inflammation, but patient objects to removal, use electric cautery. Selecting 3 or 4 crypts at a time, apply 10 per cent. cocaine solution to interior of each with fine-pointed cotton applicator. When anesthesia sufficient, introduce curved electrode into each crypt and turn on sufficient current to produce a white heat before electrode removed. Patients thus treated are freed from further attacks. *Bishop.* 241

**Tracheobronchial Glandular Enlargement.** DIAGNOSIS. Percussion of thoracic vertebrae, especially those above level of inferior scapular angles, affords tonal changes of clinical value in this condition; these must always be correlated, however, with mural signs in the individual case. In comparison with other (neoplastic) mediastinal masses, tracheobronchial tumors affect vertebral percussion sound less, and oftener produce dullness than hyperresonance. *Da Costa, Jr.* 180

**Trigger-finger.** TREATMENT. Paint the part with iodine, insert a fine bistoury in the flexure crease, and, pressing the point down to the tendon, draw it along for  $\frac{1}{2}$  inch. Relief is instantaneous and final. A small pad of boric gauze may be applied to make pressure for two days. The tendon is easily located by thumb pressure at the crease. *Abbe.*

Page 492

**Tuberculosis.** TREATMENT. Garlic, 1 fluidram (4 c.c.) of the expressed juice or 2 drops of the essential oil three times a day, recommended in all forms of tuberculosis. Externally, poultices of crushed garlic bulbs, 1 part, with 3 parts of lard, or garlic ointment (50 per cent. of the juice in petrolatum) are to be applied.

Mercury biniodide,  $\frac{1}{80}$  grain three times a day internally, and unguentum hydrargyri externally, give the best results next to garlic. In cases of severe toxemia, where more active elimination is necessary, the following treatments give best results: (1) Normal saline, 220 c.c., at  $106^{\circ}$  F.; also of value in hemorrhagic cases, intravenously. (2) Guaiacol, 32 drops in 220 c.c. of sterile water, at  $106^{\circ}$  F., intravenously. (3) Mixture of sodium salicylate, guaiacol, and glycerin, of each, 32 grains or drops in 220 c.c. of sterile water, at  $106^{\circ}$  F., intravenously. (4) A 2 per cent. aqueous solution of pure phenol (Bacelli's treatment), 1- to 5- c.c. doses hypodermically or by Murphy's drip in 10-c.c. doses; the kidneys must be watched. Cases of continued septic temperature, not improving from the above, should be treated surgically. For making the soil unfavorable for the tubercle bacillus, phosphorus,  $\frac{1}{4000}$  grain t. i. d., and Fowler's solution, 1 drop t. i. d., give the best results. *McDuffie.*

431

**Tuberculosis, Articular.** TREATMENT. X-rays found useful in bone and joint tuberculosis. Aluminum or thick leather shield to be used. Treatment not to be employed in children less than 5 years old, and in older children epiphyses should preferably be avoided. Best effects noted in cases with sinuses and secondary infection. Part exposed from all sides to an erythema-producing dose; three weeks then allowed to elapse before repetition. Joints healing under the rays show but little limitation of motion. Abscesses with skin about to yield should not be rayed, owing to danger of necrosis. *V. Schede.*

165

**Tuberculosis, Laryngeal.** TREATMENT. Scarlet red, 10 per cent. in a mixture of equal parts of sesame oil and petrolatum, applied twice daily in cases with laryngeal lesions, whether ulcerative or not. No unpleasant results. Prompt relief of pain in every case, tendency of ulcerations to heal, hoarseness improved, and, where only infiltrations and edema, swelling markedly less after a few weeks. *Hinman.*

306

**Tuberculosis, Pulmonary.** DIAGNOSIS. Contrast between resonance of air-containing tissue and deadness of the airless spot is striking when light percussion practised. If on increasing force of stroke dullness remains, one may conclude that there is an extensive area of airless tissue. A shorter apex on one side is of immense significance. In infiltrated apex a long, held inspiration gives a duller note on percussion than is found over healthy side; this is often of value in doubtful cases. Where history, symptomatology, and course of disease point to tuberculous infection, one may safely diagnosticate tuberculosis without any definite auscultatory signs. *Fishberg.*

54

The X-rays will demonstrate much more accurately the extent of involvement than any other diagnostic agent. In determining the operability of a surgical condition in a patient suffering also with pulmonary tuberculosis, or in giving a prognosis in a known case of pulmonary tuberculosis, radiographic examination is essential. *Moore.*

367

TREATMENT. Frequency of gastric atony and dilatation, with resulting digestive symptoms and secondary toxic manifestations (aches and pains in chest and right hypochondrium, morning depression, insomnia, hepatic weight, vertigo, chilliness an hour after meals, fleeting edema, etc.), in pulmonary tuberculosis pointed out. Treatment: (1) Support to stomach and abdomen by Rose belt or plaster or moleskin, followed, upon improvement, by supporting belt to be worn continuously and later in daytime only. (2) No liquids with meals or for two to two and one-half hours after. (3) Lunch to be light. (4) Recumbency, with attempt to sleep for one-half to one hour after each meal. (5) No alcohol or fresh bread. (6) Medicinal treatment: Tr. nucis vomicae, acidi hydrochlorici dil., aa f3ss (15 c.c.); glyceriti pepsini, f3iss (45 c.c.); aq. menthae pip., q. s. ad f3iij (90 c.c.). Teaspoonful in  $\frac{1}{2}$  glassful of water after meals. If much flatulence, add chloroform water, 2 or 3 minims (0.13 or 0.2 c.c.) to the dose, until relieved. (7) Cold shower or sponge baths, with needle bath to abdomen, followed by brisk rub, each morning. (8) Where mucous passages and flatus: Turkish towels, wrung out in hot water, to be applied to abdomen for one-half hour after meals. (9) Thorough mastication of food and abstention from worrying at meals. (10) Fats to be avoided at first. *F. N. Robinson.*

95

Measures to overcome fever described: (1) Where prolonged fever drains on patient's strength, pyramidon is drug to be preferred—5 grains (0.3 Gm.) in cachet at night, or, if necessary, three times a day. In neurotics bromides sometimes efficacious. (2) Rest in recumbency to be insisted on until temperature does not rise above  $99^{\circ}$  in men or  $99.2^{\circ}$  in women, when patient may sit in chair for two hours, then recline on couch, in open air if possible. Exercise then gradually in-



creased. (3) Where severe cough, sedative mixture tends to prevent fever from the exertion and autoinoculation. (4) Where rest and drugs fail, cautious use of tuberculin (T. R. or B. E.), beginning with only  $\frac{1}{100000}$  mg., exerts antipyretic action, though often only for short periods. Tuberculin acts best in cases free from fever while at rest, but febrile when exercise taken. *Wethered.*

Page 120

Value of auscultation at acromion process in apical tuberculosis emphasized; it amplifies all auscultatory signs over apices. Of 28 cases in first stage, all showed acromial breathing. *Magida.*

239

Guaiacol administration, beginning with 5 minims (0.3 c.c.) three times daily, increasing by 2 minims (0.12 c.c.) a week up to 12 or 15 minims (0.75 to 1 c.c.), and continuing the drug for four months or longer, yielded highly satisfactory results. The drug should be taken immediately before food. The following formula was used: Guaiacolis, f3j (4 c.c.); alcoholis, syrapi limonis, aa f3j (30 c.c.); spiritus chloroformi, f3ij. (8 c.c.); aqua, q. s. ad f3vj (180 c.c.). One-half ounce three times daily. *Mayberry.*

366

**Typhoid Fever.** TREATMENT. Venesection found to yield marked benefit in a case of typhoid fever with severe infection in toxemia. Removal of 6 to 14 ounces cannot do harm and may be productive of much good in such cases. *Rudolph.*

494

**Ulcer, Gastric.** DIAGNOSIS. Following combinations practically assure a diagnosis of ulcer: (1) Tender point with occult blood. (2) Hypersecretion with tender point. (3) Hypersecretion with occult blood. (4) Tender point with repeated positive thread tests. (5) Tender point with hematemeses. (6) Hematemesis with hypersecretion. (7) Hypersecretion with positive thread tests. *Verbrycke.*

114

TREATMENT. Cream diet used with success in 26 cases. One quart (4 glasses) a day yields 1800 calories. To this may be added 600 c.c. of milk or 6 slices of bread or 5 tablespoonfuls of oatmeal gruel or 3 eggs. Cream causes inhibition of gastric secretion. If not tolerated in full strength, it may be diluted with equal or greater amount of milk. Ice-cream a useful variant. Some marked cases progressed to good recovery in two or three months under cream diet. Method adapted for bed or ambulant treatment. Also useful as prophylactic against recurrence of ulcer. *Nichols.*

169

**Ulcers.** TREATMENT. In indolent tuberculous ulcers, 1 or 2 doses of old tuberculin usually cause complete healing in a week or two. *Whitfield.*

56

In old leg ulcers and infected wounds a dressing of mercuric iodide, 1 Gm. (15 grains); potassium iodide, 4 Gm. (1 dram), and water, 100 c.c. ( $3\frac{1}{3}$  ounces), is of value. *Macfarlan.*

554

**Urticaria.** TREATMENT. Pituitary and adrenal preparations found useful. *Morris.*

11

**Vaccination.** Tincture of iodine, applied to the vesicle as soon as possible after the latter has formed, and repeated two or three days later, either prevents pustule formation or so limits it that the several pustules formed do not coalesce. The vesicles soon dry up and form a small scab. In not one of 116 cases so treated was there secondary infection with pus-producing bacteria, whereas in those not so treated about 30 per cent. were secondarily infected. There is no interference with the immunizing process. The scab should be kept covered with sterile gauze for several weeks. In cases of secondary infection with pus formation best results are obtained by removing the scab and pus, painting the base with tincture of iodine, and, when dry, covering with bismuth subiodide powder. Superfluous granulation tissue should be treated with a stick of silver nitrate. *Albert and Alden.*

369

**Vomiting.** TREATMENT. In paroxysmal vomiting of chronic, recurrent character, where no organic disease of stomach is discoverable, adrenal gland treatment is frequently of value. *Berkeley.*

20

Carbon disulphide, applied for fifteen seconds over the epigastrium, will produce the same effect as counterirritation with a strong mustard plaster for half an hour. *Seelye.*

542

**Vomiting of Pregnancy.** TREATMENT. Apomorphine,  $\frac{1}{16}$  grain (0.0018 Gm.) in a teaspoonful of water, found effectual in a severe case; likewise in other cases of vomiting or nausea. *Field.*

182

Thyroidin in  $1\frac{1}{2}$ -grain (0.1 Gm.) tabloids given in several cases, with complete curative effect. *Koreck.*

284

Brilliant results obtained in some cases by administration of thyroid preparations. *Walker.*

409

**Vomiting, Postanesthetic.** TREATMENT. When vomitus of hemorrhagic type, give 5 to 10 minims (0.3 to 0.6 c.c.) of 1:1000 epinephrin hydrochloride in a teaspoonful of water. Cessation of vomiting follows. *Keay.*

93

**Whooping-cough.** TREATMENT. Vaccine containing 20,000,000 dead *B. pertussis* per c.c. used in about 70 cases. Infants received  $\frac{1}{8}$  c.c. as initial dose and  $\frac{3}{8}$  c.c. four days later; others,  $\frac{1}{2}$  c.c. and 1 c.c. Prompt, uniformly good and often striking results obtained. In cases already having a bronchopneumonia as complication, a mixed vaccine should be used. *Davidson.*

118

Silver nitrate in 2 per cent. solution applied to throat in 95 early cases to prevent spread of infection downward from pharynx. Useful results in 84 instances. Mucus secretion prevented and coughing spells due to irritation by secretion minimized. Silver solution applied every day at first; later, and in older



children throughout, on alternate days. *Ochsenius.* Page 182

Epinephrin, 3 minims (0.2 c.c.) of 1:1000 solution, given every four hours in case in a child 7 years old, ill six weeks. Paroxysms markedly reduced almost at once. Drug then continued 3 times a day for three weeks more. *Lord.* 280

**Wounds.** TREATMENT. Stream of air from ordinary electric fan or register found useful in drying and promoting healing in large wounds, obstinate leg ulcers, and discharging eczema. *Heisler.* 182

Mixture of saturated magnesium sulphate solution and glycerin in equal parts recommended for dressing infected wounds. *Freese.* 304

Following summary presented: *A. Incised wounds:* 1. Paint with iodine. 2. Shave dry. 3. Tie all bleeding points. 4. Remove foreign substances. 5. Suture all tendons and nerves. 6. Again apply iodine in and around wound. 7. Suture wound. 8. Apply dry sterile dressing.—*B. Lacerated wounds:* 1, 2, 3, 4, 5, same as in *A.* 6. Cut away all damaged tissue. 7. Again apply iodine. 8. Suture wound.—*C. Punctured wounds:* 1, 2, same as in *A.* 3. Enlarge opening for drainage. 4. Insert rubber drain. 5. Alcohol dressing. 6. Tetanus antitoxin.—*D. Gunshot or bullet wounds:* 1, 2, same as in *A.* 3. If much bleeding, enlarge opening and tie vessels. 4. If nerve injured, suture nerve. 5. Close wound. 6. Alcohol dressing. 7. Tetanus antitoxin. *Hoag.* 307

## Book Reviews

**A TREATISE ON DISEASES OF THE RECTUM AND ANUS.** Edited by A. B. Cooke, A.M., M.D., Formerly Lecturer on Diseases of the Rectum and Professor of Anatomy in the Medical Department, University of Nashville; Fellow and Sometime President of the American Proctologic Society, etc. Octavo of xvi + 619 Pages, with 215 Illustrations in the Text and 21 Full-page Plates, 7 in Colors. Philadelphia: F. A. Davis Company, 1914. Cloth, \$5.50, net.

This work, originally begun a number of years ago by its editor with the intention of presenting a practical treatise based on his exclusive personal experience in the management of rectal cases, now appears as a textbook of multiple authorship, with the first 16 of its 30 chapters written, however, by the editor himself. The subjects he has dealt with comprise the anatomy and physiology of the anorectal region; general diagnosis and symptomatology; constipation and obstipation; fecal impaction; pruritus ani; proctitis and proctocolitis; non-malignant ulceration; amebic dysentery; anal fissure, etc.; perirectal abscess; anorectal fistula; complications of fistula operations; hemorrhoids, and prolapsus. The subsequent chapters are on fibrous, non-malignant stricture, by W. M. Beach; benign neoplasms, by G. S. Hanes; colotomy and extirpation of the rectum, by G. B. Evans; rectal pathology due to extrarectal causes, by A. B. Graham; local anesthesia in anorectal surgery, by A. J. Zobel; injuries and rupture of the rectum and sigmoid and foreign bodies in the rectum and sigmoid, by L. J. Krouse; reflexes and neuroses of the rectum and anus, by C. F. Martin; relation of rectal diseases to the general health, by G. S. Hanes; rectocolonic alimentation, by A. B. Graham; developmental malformations of the rectum and anus, by F. C. Yeomans, and malignant tumors of the rectum, by J. Coles Brick. In spite of the plural authorship of the work, the views expressed in different sections are in entire accord on all essential points. Of the sections written by the author himself, those on amebic ulceration, anorectal fistula, and internal hemorrhoids are especially valuable, the details of treatment being presented with marked completeness as well as originality. Particularly noteworthy among the sections by other authors are those of G. B. Evans, on extirpation of the rectum; A. J. Zobel, on local anesthesia; J. C. Brick, on malignant tumors, and C. F. Martin, on reflexes and neuroses of the rectum and anus. The work is well balanced, contains a large and useful variety of original illustrations, and can be warmly recommended to the practitioner. The student who reads it will possess a sound and authoritative groundwork for subsequent practical work in the field it covers.

**PSYCHANALYSIS: ITS THEORIES AND PRACTICAL APPLICATION.** By A. A. Brill, Ph.B., M.D., Chief of the Clinic of Psychiatry and Clinical Assistant in Neurology, Columbia University Medical School; Chief of the Neurological Department of the Bronx Hospital and Dispensary. Second Edition, Thoroughly Revised. Octavo of 393 Pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.00, net.

In the second edition of this work new illustrative material of a practical nature, *e.g.*, analyzed dreams, and histories of various other cases, appears. In addition, two new chap-

ters have been introduced, and the text revised and amplified. The new material comprises discussions on artificial dreams, the unconscious factors in neuroses, collecting manias, pathologic homosexuality, and fairy tales as a determinant of dreams and neurotic symptoms. A glossary of psychoanalytic and psychosexual terms has also been inserted. As before, the main object of the author has been to "present the practical application of Freud's theories." In spite of the vigorous opposition to the views of Freud that has arisen from many quarters, Dr. Brill is not disposed to recede in the least from any statements previously made, claiming that local critics "are constantly rehashing what was said abroad, and which was adequately answered long ago." He insists that psychoanalysis is the most rational and effective method of psychic therapy, and points to the assent given to the chief of Freud's conclusions by Bleuler, August Hoch, Jung, Adolph Meyer, and Putnam. "One cannot expect to become proficient in psychoanalysis," however, "unless he has mastered at least Freud's theories of the neuroses, the interpretation of dreams, the sexual theories, the psychopathology of everyday life, and his book on wit, and last but not least who has not had a training in nervous and mental work. Besides these qualifications one must know how to select his cases." Whatever be the limitations ultimately imposed by general consensus of opinion and experience upon the field of usefulness of psychoanalysis, the author of this book deserves, at least, some credit for presenting Freud's system to the critical examination of the English-speaking profession in so readable a form.

A HISTORY OF LARYNGOLOGY AND RHINOLOGY. By Jonathan Wright, M.D., Director of the Department of Laboratories, New York Post-Graduate Medical School and Hospital. Second Edition, Revised and Enlarged. Octavo of 357 Pages. Philadelphia and New York: Lea & Febiger, 1914.

In this work the author has aimed not only at tracing the history of the medical study of the nose and throat, but also at linking together the facts gleaned with medical history in general, with the salient features in the early history of the civilization of mankind, and with the general literature that has a bearing upon the subject. Approximation of the style to that of an encyclopedia or dictionary has thus been avoided, but care has also been taken, while thus rendering the work more attractive, not to impair its accuracy. In the field of general literature, works such as those of Buckle, Guizot, Gibbon, Prescott, and Renan were consulted. The beginning of the book covers the specialty of the nose and throat as it figured in the medical system of the Egyptians, Chaldeans, Babylonian Jews, Hindus, Greeks before, during, and after Hippocrates, and the Romans. Next are taken up the laryngology and rhinology of Celsus, Galen, Greek writers of the Eastern Empire, the Arabians, as well as of the periods of Pre-Renaissance and Renaissance. Then come sections on the results of the renaissance; intranasal surgery and pathology of the seventeenth and eighteenth centuries; the prelaryngoscopic era; laryngeal phthisis; the laryngoscope; the tonsils; nasal anatomy, physiology, and pathology, etc. The terminal portions of the book are concerned with modern developments in respect of various special morbid conditions such as atrophic rhinitis, rhinoscleroma, laryngeal paralysis, etc. There are also indices of personal names and of subjects. In the present, second, edition the text has been carefully revised from the original draft, which had not been modified in the first edition after its appearance in instalments in a special periodical. The work affords decidedly good reading, especially in its first portion, and in its second part, with the many references contained, will prove useful to those who desire to examine the original papers of the investigators responsible for modern advances in laryngological and rhinological practice.

HYGIENISCHES PRAKTIKUM. Ein Taschenbuch für Studierende, Aertze, und Kreisartzkandidaten. Von Dr. med. Paul Uhlenhuth, Ordentl. Professor der Hygiene an der Universität Strassburg, und Dr. med. Hermann Dold, Privatdozent der Hygiene an der Universität Strassburg. Pp. 272, with 89 Text Illustrations and 1 Plate. Berlin und Wien: Urban & Schwarzenberg. New York: Rebnan Company, 1914.

This small work presents the German official course in hygiene in a somewhat expanded form. A clear, concise description is given of a wide variety of laboratory procedures required in the examination of the soil, water, solid foods, milk, butter, and other fats, meats, flour, alcoholic beverages, clothing, air, air currents, light, and illumination. It contains some tabular material, a sufficiency of illustrations, and lists of the apparatus and chemicals necessary in the various practical tests described. The book is surprisingly complete in its way—all purely theoretic matter having, of course, been omitted—and cannot fail to prove useful as a laboratory manual.

## The General Field

Conducted by A. G. CRANDALL

### Safe from Invasion

It is plain that the prompt determination of the English to participate in the great war was a big surprise to their opponents, who had secured the impression that the English were so peace loving that only an invasion of their country would be likely to rouse them.

Evidently the leaven of war-like aggressiveness which has been instilled in the English nation by a certain Pankhurst family was overlooked.

That the English have enlisted for the war and their fighting blood is up is made evident in numerous conflicts. And they have at home for close-range fighting, in case of an invasion, a reserve corps calculated to strike terror to any enemy, no matter how effective their "war machine."

In case of invasion there are the militants, each one equal to 10 Uhlans, each one prepared to chain herself to a rapid-fire gun, or rise on an aeroplane and pour tracts and sulphuric acid upon the enemy's officers. There is no question as to the safety of England from invasion. It is easy to contemplate a panic of the invaders that would choke the Thames from London Bridge to Gravesend.

\* \* \*

### Entire Wheat Flour

The "staff of life" is being attacked on every hand. Owing to the demand by ignorant housekeepers for ultra white flour and the desire of manufacturers to secure maximum profits, the flour of commerce is a wide departure from what physiology says it should be.

A contributor to the Medical Record regards the use of entire wheat flour in bread as one of the best of preventives of pellagra, as it has a tendency to clear the intestinal canal of accumulated toxins which might otherwise be absorbed. This is a parallel line of reasoning with that which explains the cause of beriberi as due to polished rice.

This is a superficial age and nothing shows this fact more plainly than the fanciful demand for foods. Such eras of world history have usually been followed by periods in which the human appetite was not nearly so finicky. A host of people who now demand dainties may yet be glad to get good plain German sauerkraut, with wiener schnitzel as a weekly luxury.

\* \* \*

### The Diet in Lactation

In a certain Eastern city it was reported some time ago that quite a number of graduated physicians were wearing uniforms and collecting 5-cent fares on the street cars.

Presumably these gentlemen would have preferred under reasonable circumstances to continue their gentle ministrations to the sick; but for some reason they have deprived themselves of that solace and are employed by a soulless corporation.

It is most natural that one should speculate as to the causes which led these possessors of the coveted sheepskin to resist the enticements of medical science and give their attention to commerce as personified above. While the guessing is good, here is a suggestion. We will guess that these medical men conscien-

tiously undertook to impress upon some of their women patients the suitable diet in lactation.

Let us suppose that the young physician has a deep-seated conviction that a young mother of an infant should provide all necessary nourishment for same herself. Granted that the mother complies with instructions, and adopts the indicated liberal diet comprising milk, cream, and easily digested starch foods. The baby will thrive prodigiously and so will the mother. But alas, not for long. The mother, in a panic at her rapidly increasing weight, will have sought another doctor and have passed the wireless signal to her friends.

The transition from the snug little office to the middle aisle of the street car is thus made clear.

This subject might be amusing if for a great variety of reasons it were not very much the reverse.

\* \* \*

### **A Million Boarders**

The director of public health of the city of Philadelphia has issued an important statement. He says there are a million rats in Philadelphia at the present time, and that not nearly so many are needed.

It should not be presumed that the director has had a census made of these rats; presumably it is mere guesswork on his part, and if somewhat annoyed by personal experiences with rats he may have somewhat exaggerated his estimate. On the other hand, it is more than possible that his figures are altogether too conservative.

At any rate a million rats are a considerable tax upon a thrifty community. With much business depres-

sion in the city there is enough demand upon its charitable facilities exclusive of the large rat population.

If it were possible to make an accurate estimate of the actual damage done by these undesirables through the destruction of property and the carrying about from one domicile to another of the germs of disease, it is probable that the figures would be staggering. It is human nature to overlook the perils which are not seen, but under no condition should the rats ever be overlooked, as probably no system of public improvement that the city can adopt will give better returns than will an efficient program of extermination against rats.

\* \* \*

### **Those Panama Mosquitoes**

We have all read with great admiration of the annihilation of the mosquito pest on the Canal Zone, which made the building of the Canal possible. This has seemed to be a most marvelous achievement, but it is possible that our idea of mosquito ferocity at the Isthmus of Panama has been exaggerated.

It is said that the original Indian inhabitants of the Antilles were much more amiable and gentle in their disposition than were the Mohawks of the North. It is possible that similar difference of temperament may have existed between the Panama mosquitoes and those of Jersey.

In any event we would like to see some of those Canal Zone tactics tried out in the region across the Delaware. We have an idea that the emancipator of Panama would find a foeman worthy of his mightiest achievement and as much more ferocious than its Southern cousin as was the painted Algonquin of Sche-

nectady more bloodthirsty than the gentle savages who accompanied Columbus back to Spain. We feel sure that no system of mosquito warfare would conflict with the New Jersey game laws, and that no limit would be placed on the day's bag.

\* \* \*

### Catching Cold

A prominent New York physician has written a treatise on clinical medicine in which he attributes most of the causes of disease to catching cold.

The probabilities are there will be many dissenters to his views, and that, while this theory will be regarded as original and picturesque, it will not produce a marked influence on prevailing clinical methods.

However, if there could be a general elucidation on the causes of taking cold, it is probable that all that this distinguished author has been seeking to accomplish would be carried out and that the average span of life would be greatly increased.

Taking cold seems to be mainly a symptom of a general condition, which makes itself manifest in this form instead of in some other way. A great many observers consider this predisposition to colds as an indication of a state of repletion, which inevitably tends to a diminution of physical efficiency.

A very intelligent man of middle age, of sturdy build and physique, announced his intention of never having any more colds. He said he had discovered to his entire satisfaction just how they could be prevented. It was all a question of judgment in diet. He certainly was a most excellent physical exponent of his theory, but unfortunately, as an

evidence of how matters go to extremes in this life, he died before he had the opportunity to fully carry out to a logical conclusion his system of health and longevity. He perished in a fire which consumed his dwelling in the middle of the night.

There has seldom been a more propitious time in which to test the abstinence method for the prevention of colds than at present, when prices of food products continue to soar.

\* \* \*

### The Cardiac Effects of Motoring

Closely following the advent of the automobile were devices for measuring the blood-pressure, while at the same time there has been a largely augmented curiosity manifested by physicians as to the composition of the blood.

A medical observer has noticed that the motorist is quite prone to do very little walking although having a largely increased appetite as the result of the rapid ride in the open air. Coincident with these conditions there is apt to be an increased blood-pressure.

The blood-pressure instrument is, therefore, quite frequently applied to the motorist. On the contrary, an entirely different process of investigation seems to be required for the pedestrians, who are busily engaged during the business hours in dodging the on-rushing automobile.

Take two examples of late middle life: One the well-fed motorist and the other the woman of neurotic type; these two individuals might have occasion to consult the same physician, during the same office hours. The competent physician would promptly resort to his blood-pressure instrument in the one case, while in the other he



will with equal logic and reason make a blood-count.

Now this entirely routine procedure if traced back to its original source will naturally involve the automobile. On the one hand, the motorist consumes altogether too much food, owing to the fictitious appetite above referred to; in the other instance the corpuscle deficiency could quite likely be traced back to the blood-curdling influence produced upon the neurotic female in question by the hideous siren operated by the high blood-pressure motorist who was "next" in the consultation room.

It is evident that to the already large list of automobile accessories there should be added devices for recording the cardiac phenomena identified with this great modern sport. \* \* \*

### The Sutlers

Civil War veterans recall the parasites who, skulking in the rear of the army, were amassing small fortunes through the sale of small luxuries to the soldiers. Naturally they were not in evidence when the battle was on, but were taking the best possible care of themselves.

We have seen the same spirit manifested lately. The wholly inexcusable advance in food prices is a natural parallel with the enterprise of the army sutler. A multitude of poor families have been forced to pay an exorbitant price for necessities in order that the sutlers could secure unreasonable profits.

Every city and large town should conduct municipal markets where people who are willing to carry their supplies home themselves may be assured of fair dealing and fair prices. Such an enterprise is in the interest

of public health and public morals, providing an evidently necessary check upon the rapacity of those who, owing everything to the public, are, nevertheless, public enemies.

\* \* \*

### Petroleum

It is difficult to understand how the world managed to exist so many centuries without petroleum.

One of the literally crying needs for petroleum is only now being made clear. A contributor to the London Lancet pronounces this world benefaction to be a panacea for infantile colic. Administered to the most pronounced pessimist of the extreme juvenile type, it acts like a charm. The evident regret that he has ever been born is succeeded by a bland serenity and a new outlook on life which is shared by the attendants.

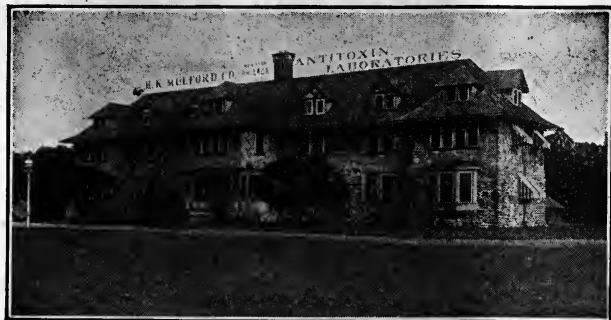
Petroleum is recommended for numerous other ailments of humanity, both internal and external. In fact, the more one can be brought into juxtaposition with this great product the better. A farmer who was greatly troubled with chapped hands had a leaky kerosene lantern. To his surprise he discovered that this annoyance had in some way resulted in curing his hands.

Life at its best seems to be one successive round of pleasures with petroleum. Starting with the cradle, it cures colic. It protects the skin from the elements, and the mucous membranes from irritations. The enlivening odor of gasoline pervades the delight of motoring, as well as the process of removing from fabrics the stains of travel. Therapeutically, mechanically, and socially, petroleum stands in the front as a Rockefeller Foundation of Comfort.

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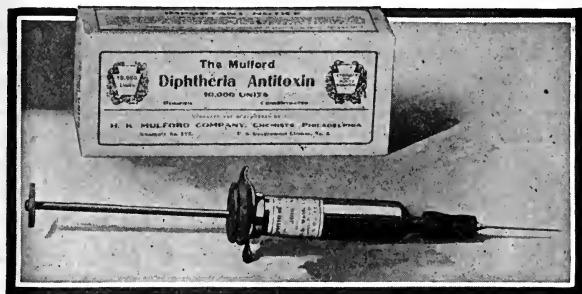
**Larger Doses are Necessary.**—The object in administering Diphtheria Antitoxin is to neutralize, in the shortest possible time, the poison (toxin) circulating in the blood stream and tissue fluids. Dr. William H. Park advises 10,000 units in severe cases for little children, and 20,000 units in severe cases for adults. This is practiced in many leading hospitals.

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\* Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.8. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.



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## Notes and Comments

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It is evident that the enterprise and FALLING initiative of the railway systems BEHIND. have been greatly overestimated.

It is only necessary to take into account the great multitude of American tourists who were caught in the recent cataclysm which suddenly overwhelmed the Continent, many of whom are presumably possessed of only moderate means, to prove the correctness of the above statement.

In their eagerness to secure freight traffic the railroads have given little attention to the hosts of vacationists who at various seasons of the year feel the spirit moving them to go somewhere.

The running of passenger trains constitutes a necessary charge upon the railroads and many more passengers could be carried with little additional expense. Railroad travel at many vacation points has been abnormally bad this season, presumably because of business depression, and yet we have an object lesson in the hordes of Americans who have been patronizing the various foreign steamship lines, submitting to all kinds of hotel impositions and spending their money without stint to enrich other countries than their own.

The railroads are largely to blame for this. When they were forbidden by law to pay for advertising with transportation they revenged themselves upon the public by refusing to advertise. They are now reaping the natural harvest of such a policy.

In this era, when advertising has reached the dimension of a fine art, when an article costing 25 cents can be sold at \$5.00 through systematic advertising and a cent's worth of food by the same means can be sold in carload lots for 10

cents per package, it is time the railroads woke up to the opportunities that are now knocking harder at their doors than ever before.

The annual loss to the country through insect pests which destroy HARMFUL INSECTS. crops and shrubbery is tremendous. Extermination, or at least holding all these public enemies in check, is a matter of very great importance.

And yet it is likely that not one person in a thousand who can read and write and who passes for being educated will know anything definite as to the family history and development of these pests.

The suggestions of the U. S. Dept. of Agriculture, that school children ought to be encouraged to make a collection of the different harmful insects with a view of studying their habits and the conditions under which their propagation is made easy, is undoubtedly a very good one.

Not alone does this problem concern the farmer; often in the cities where there are grass plots and back yards the same perplexity is to be found. Every plant and every shrub has its parasite that must be destroyed, or the householder's investment of time and care in the production of flowers and the maintenance of shrubbery is practically lost.

There is probably no more civilizing and elevating course of study for children than natural history.

The U. S. Dept. of Agriculture will supply an explanatory bulletin on request.

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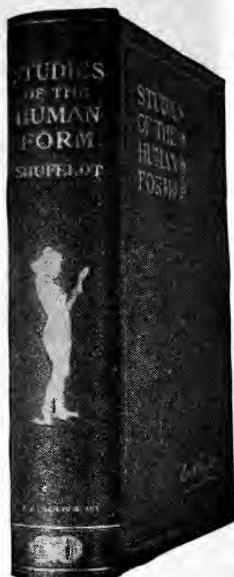
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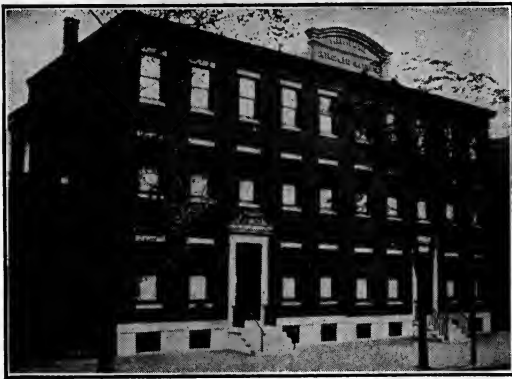
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must be slaughtered apart from the other animals. If found diseased the carcass must be placed at once in the denaturing tank in order that there will be no possibility of it being used as food.

The regulations prescribe that any inspected establishment which violates any of the regulations may suffer the penalty of having all inspection withdrawn. This would mean that such establishments could not ship any meat in interstate commerce or abroad.

Following the German plan the new meat-regulation inspection provides that animals which are affected with some form of localized cysts or lesions may not necessarily be wholly condemned, but such carcasses may be thoroughly sterilized, cooked, and placed in sealed containers for commercial use. Canned meats are not regarded with any too much favor in this country anyway, and, if it is understood that animals which have suffered some injury and have unhealed lesions or cysts necessarily affecting their vitality somewhat may yet be slaughtered for food, it will not apparently tend to enhance the popularity of canned meats.

The steadily increasing importation of South American beef, the system of inspection of which little is known here, may reconcile consumers to almost anything. The prices of meat constantly going higher must inevitably tend to greatly restrict the consumption of meats among the greater portion of our population.

Some observer of originality,  
**BALD HEADS.** to say the least, predicts that as women assume more and more the responsibilities heretofore borne chiefly by men they will exhibit to a greater and greater extent the physical qualities of men, including a

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## AUTO-INTOXICATION IN DISEASE; Or, Self-Poisoning of the Individual.

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tendency to baldness and to hairy growths upon the face.

Many unavailing arguments have been addressed to women on the propriety of their being content with their normal feminine lot. Perhaps if they could be induced to accept the above warning it would produce some effect. Unfortunately the theory has many weak elements. The wear and tear of excessive use of the brain tissue may account for some cases of baldness, but this condition has been observed so frequently among those whose brain capacity has been rated at a low figure that it is a commonly accepted theory that baldness is quite as commonly associated with high living as with high thinking.

It often requires some per-  
**BUTTERMILK** severance on the part of the  
**FEEDING.** family doctor to convince the  
anxious mother that raw  
buttermilk will be of any service to her child.  
The chances are that the mother dislikes it herself

and when the doctor prescribes it for the infant, who doesn't want it and perhaps cannot at first retain the buttermilk on its stomach, it seems to her to be little less than cruelty. Nevertheless, persistence in the use of buttermilk is the means of saving a great many infants that seem to be unable to assimilate any other food. And that which the child at first resists becomes more readily acceptable.

Metchnikoff has paved the way for the gradual acceptance of the lactic acid theory in the treatment of malnutrition, so that buttermilk feeding cannot be regarded as a temporary fad, but is, on the contrary, based on the soundest principles of physiology.

Not only in the feeding of infants, but of adults, is this form of treatment likely to assume a large importance. It is stated, however, that when buttermilk is sterilized its bactericidal properties are destroyed. Typhoid bacilli still remain virulent, even when long immersed in sterilized buttermilk. When the buttermilk is not sterilized they lose their virulence in forty-eight hours.

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Fischer, in his textbook ("Diseases of Infancy and Childhood," 5th edition, \$6.50, F. A. Davis Company, Philadelphia), gives a great deal of valuable information as to the use of buttermilk.

Practically all the substitutes for INFANT mother's milk which have been FEEDING. recommended for feeding infants, from modified cows' milk to the most expensive proprietary food, lack the necessary amount of proteid or some of those hematinic constituents which are essential to the proper development and growth of the infant. Fortunately, these food constituents may be added in the form of Bovinine, which is particularly rich in proteids (14.7 per cent.) and hemoglobin (8.35 per cent.) and other compounds which promote the formation of red blood-corpuscles and elevate the tone of the metabolic processes of the body. In this capacity it is an

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(Continued from page 38.)

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